

## Electronic Supplementary Information

### Targeted dextran-*b*-poly( $\epsilon$ -caprolactone) micelles for cancer treatments

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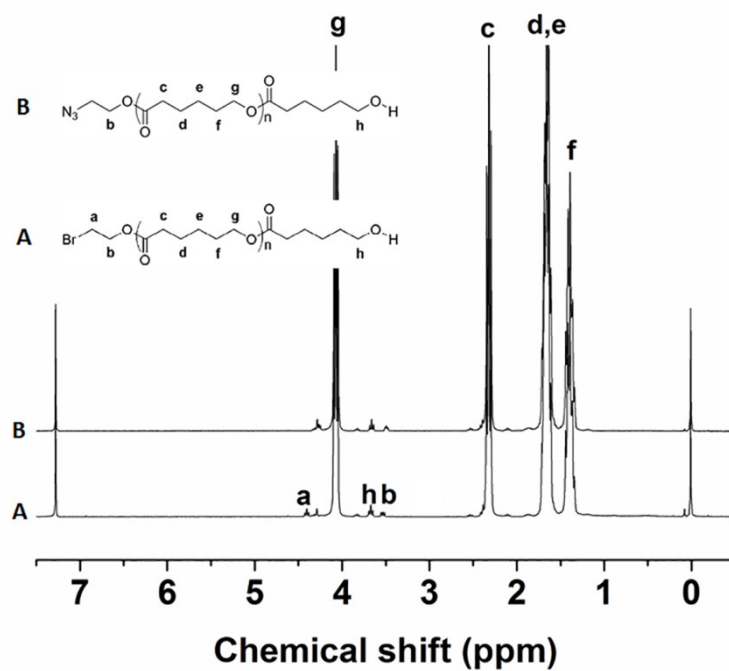
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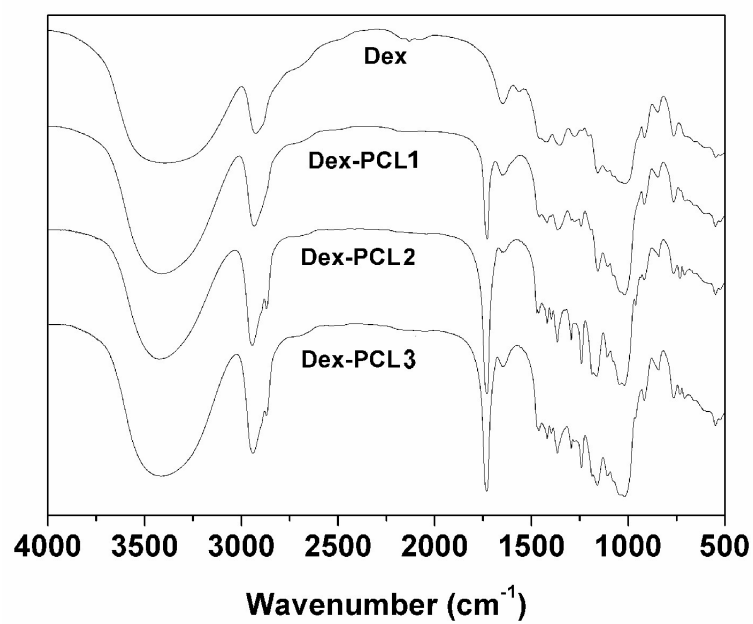
**Table S1**

The molecule weight of Br-PCL determined by <sup>1</sup>H NMR and GPC

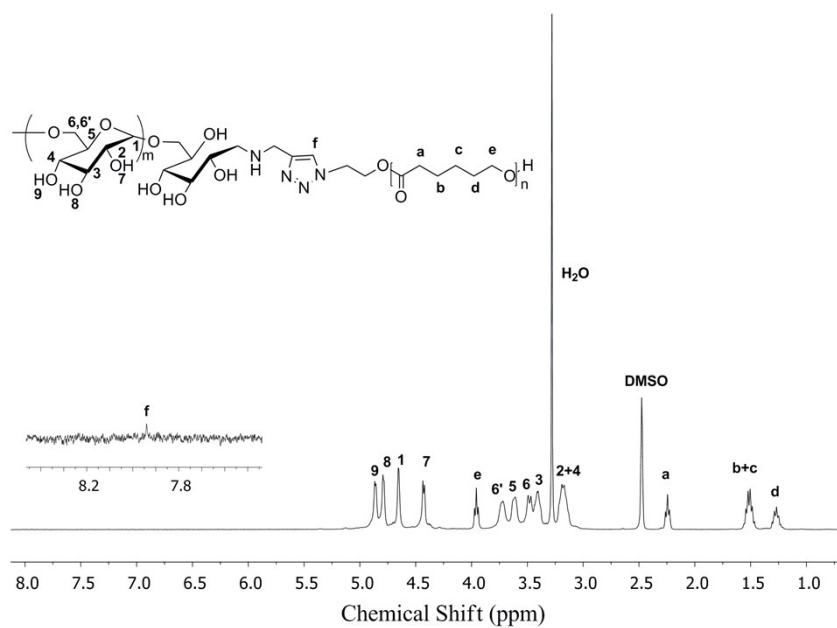
|         | M <sub>n</sub> in theory | M <sub>n</sub> from <sup>1</sup> H NMR | M <sub>n</sub> from GPC | PDI  |
|---------|--------------------------|----------------------------------------|-------------------------|------|
| Br-PCL1 | 2000                     | 1800                                   | 1900                    | 1.31 |
| Br-PCL2 | 4000                     | 4200                                   | 4300                    | 1.28 |
| Br-PCL3 | 6000                     | 5900                                   | 6500                    | 1.34 |



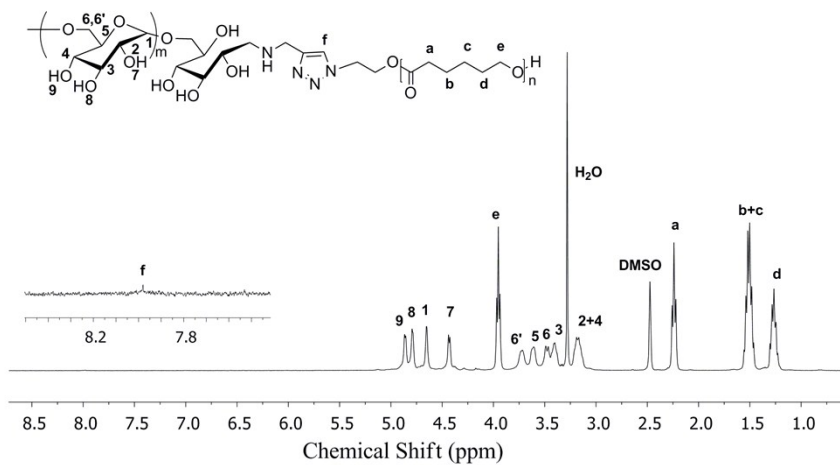
**Fig. S1.**  $^1\text{H}$  NMR spectra of Br-PCL (A) and  $\text{N}_3$ -PCL (B) in  $\text{CDCl}_3$ .



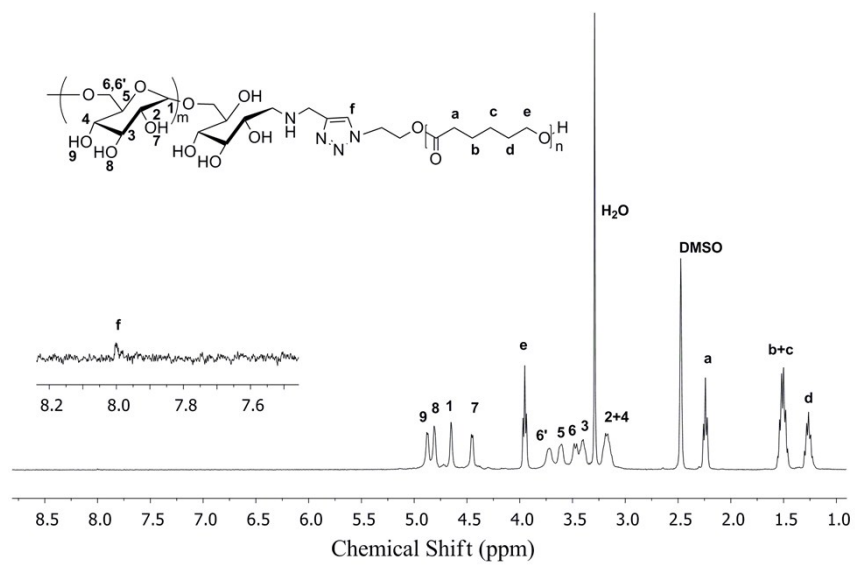
**Fig. S2.** FT-IR spectra of Dex, Dex-PCL 1, Dex-PCL 2 and Dex-PCL 3.



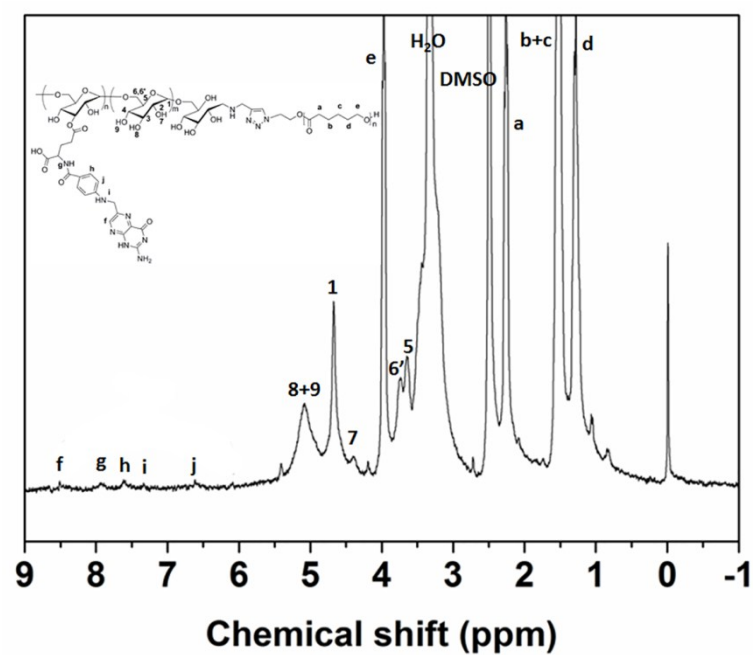
**Fig. S3.**  $^1\text{H}$  NMR spectrum of Dex-PCL 1 in  $\text{DMSO}-d_6$ .



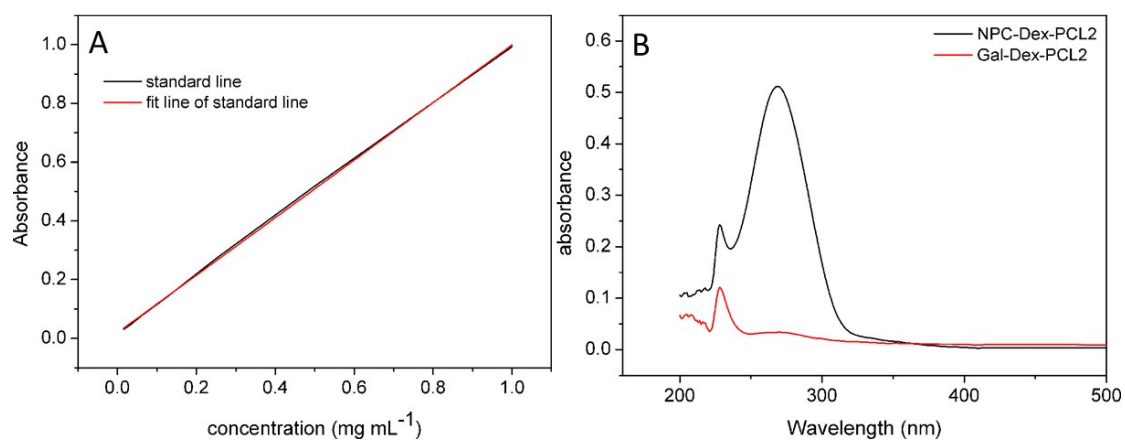
**Fig. S4.**  $^1\text{H}$  NMR spectrum of Dex-PCL 2 in  $\text{DMSO}-d_6$ .



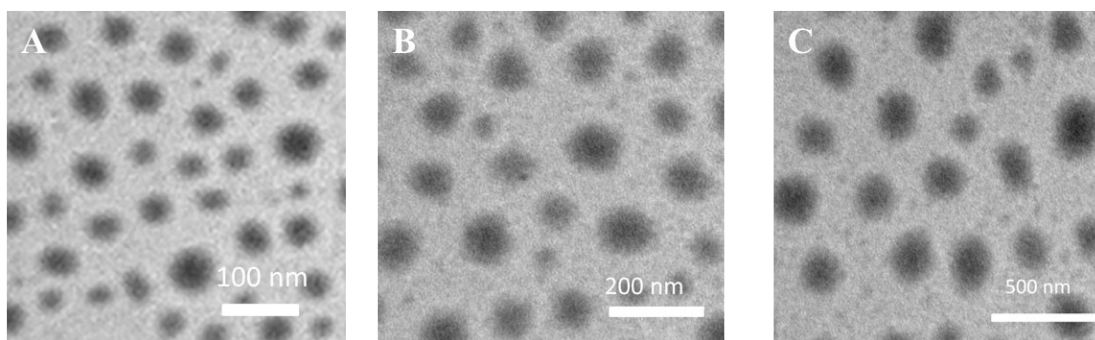
**Fig. S5.**  $^1\text{H}$  NMR spectrum of Dex-PCL 3 in  $\text{DMSO}-d_6$ .



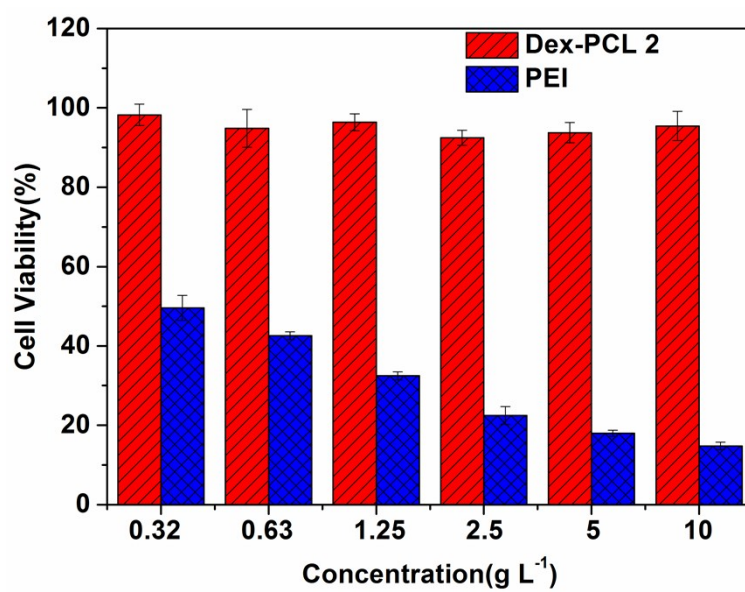
**Fig. S6.**  $^1\text{H}$  NMR spectrum of FA-Dex-PCL 2.



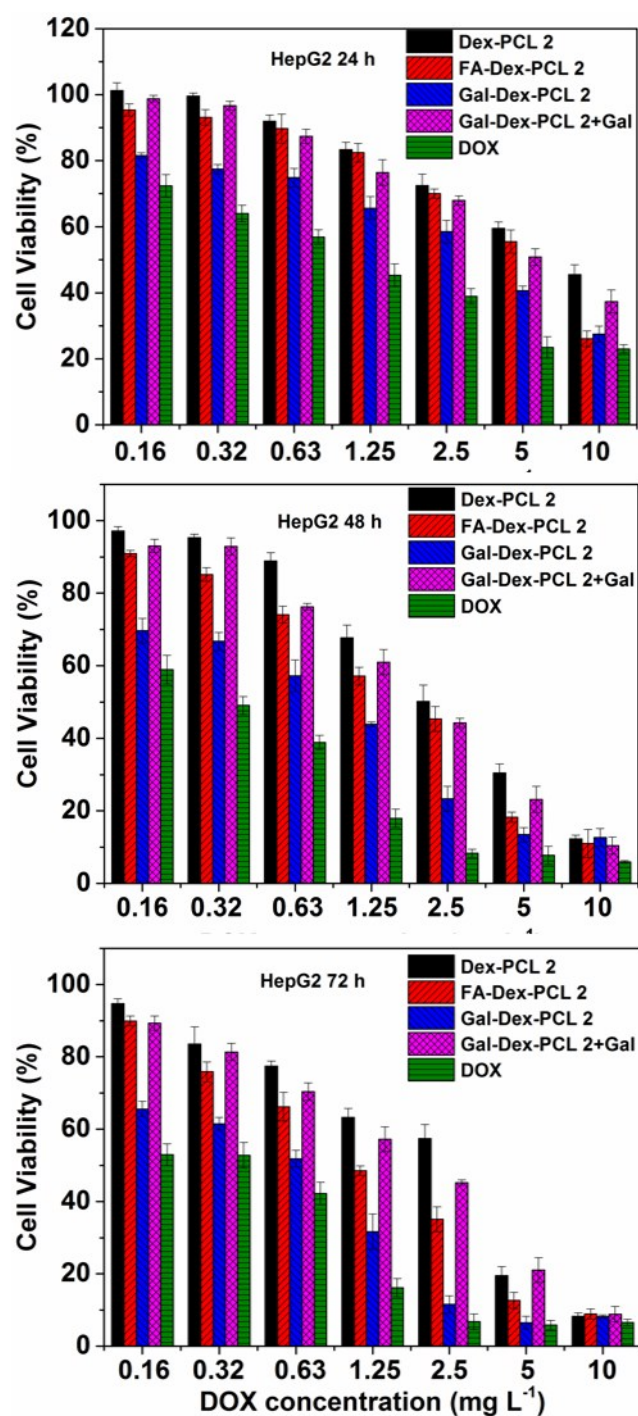
**Fig. S7.** UV-vis spectroscopy of standard curve (A) and difference between NPC-Dex-PCL2 and Gal-Dex-PCL2 (B)



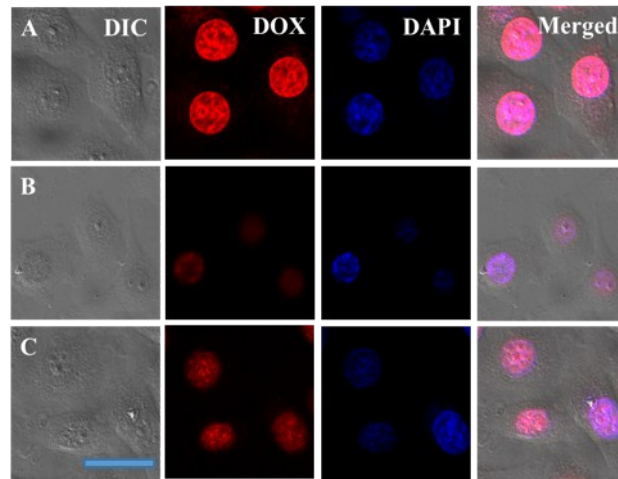
**Fig. S8.** TEM micrographs of Dex-PCL1 (A), Dex-PCL2 (B) and Dex-PCL3



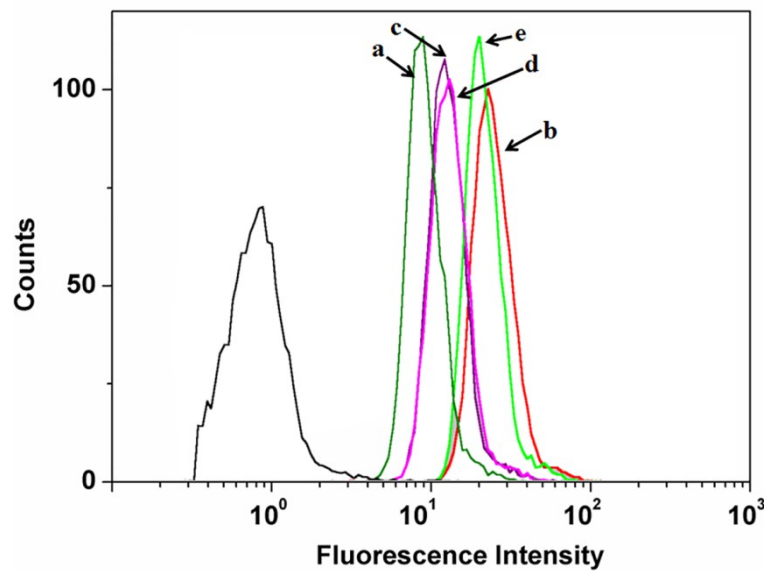
**Fig. S9.** Cytotoxicities of Dex-PCL2 and PEI towards HepG2 cells after incubation for 72 h.



**Fig. S10.** Cytotoxicities of DOX-loaded Dex-PCL2, FA-Dex-PCL2, Gal-Dex-PCL2, Gal-Dex-PCL2 with free Gal and free DOX towards HepG2 cells after incubation for 24, 48, and 72 h, respectively.



**Fig. S11** Representative CLSM images of HepG2 cells incubated with DOX-loaded Gal-Dex-PCL 2 (A), DOX-loaded Dex-PCL 2 (B) and DOX-loaded Gal-Dex-PCL 2 with free Gal for 4 h. For each panel, the images from left to right show differential interference contrast (DIC) image, DOX fluorescence in cells (red), cell nuclei stained by DAPI (blue), and overlays of the three images. The scale bar is 20  $\mu\text{m}$ .



**Fig. S12.** Flow cytometric profiles of HepG2 cells incubated with DOX-loaded micelles for 2 h. DOX-loaded Dex-PCL2 (a), DOX-loaded Gal-Dex-PCL2 (b) DOX-loaded FA-Dex-PCL2 (c), DOX-loaded Gal-Dex-PCL2 with free Gal (d) and free

DOX (e).

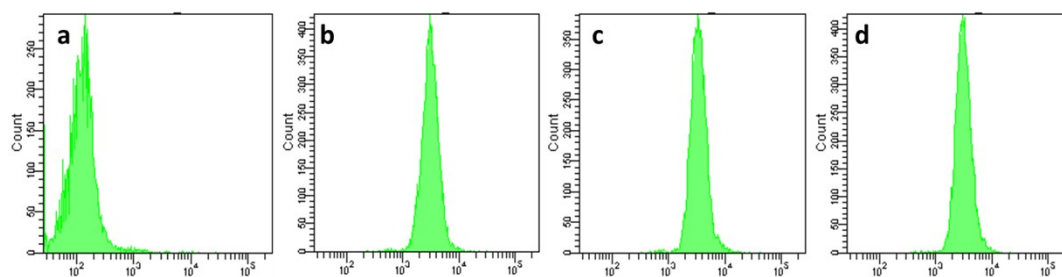


Fig. S13 Flow cytometric profiles of L929 cells incubated with DOX-loaded micelles for 2 h. PBS (a), DOX-loaded Dex-PCL 2 (b), DOX-loaded Gal-Dex-PCL 2 (c), DOX-loaded FA-Dex-PCL 2 (d), respectively.