

Supporting Information of

A reactive oxygen species-responsive prodrug micelle with efficient cellular uptake and excellent bioavailability

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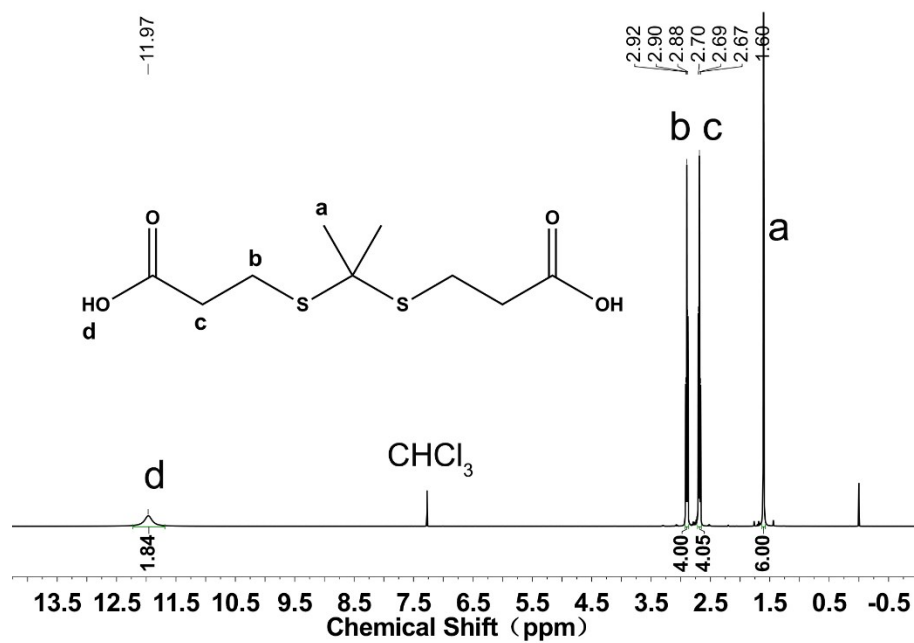


Fig. S1 ^1H NMR spectrum of TK in CDCl_3 .

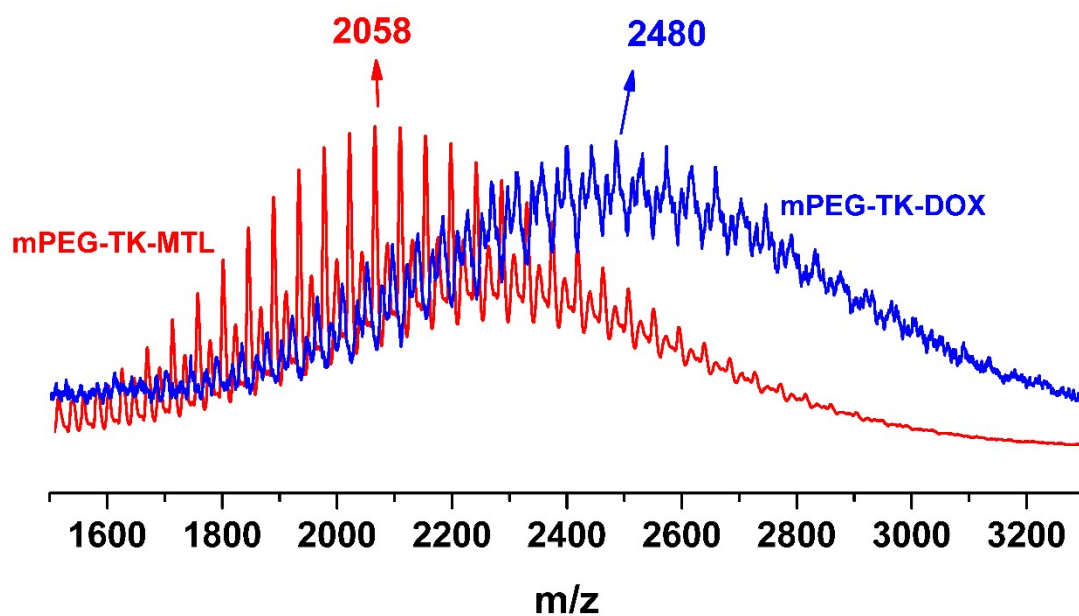


Fig. S2 MS spectra of mPEG-TK-MTL and mPEG-TK-DOX.

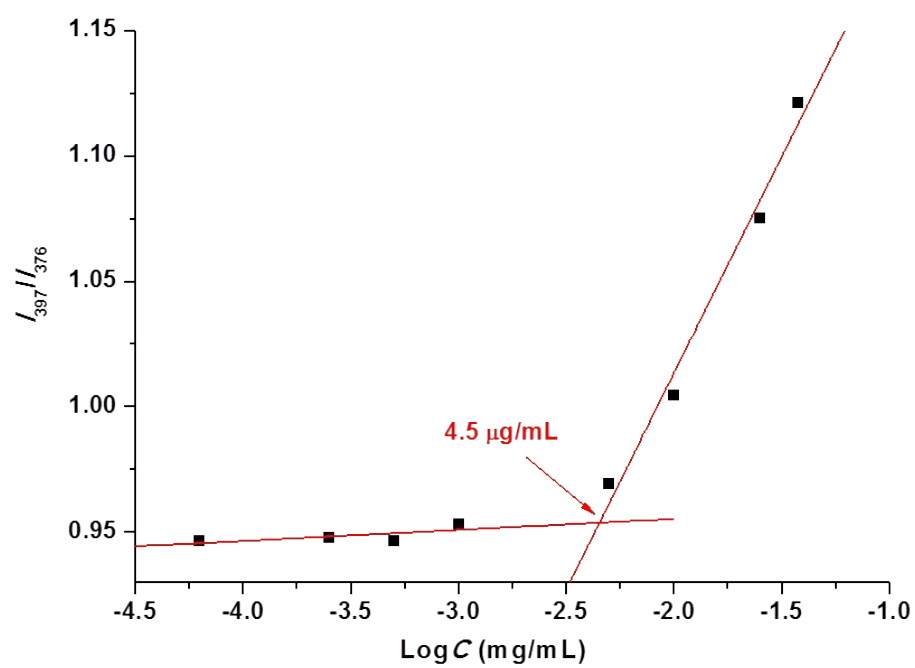


Fig. S3 The CMC of prodrug micelle mPEG-TK-DOX.

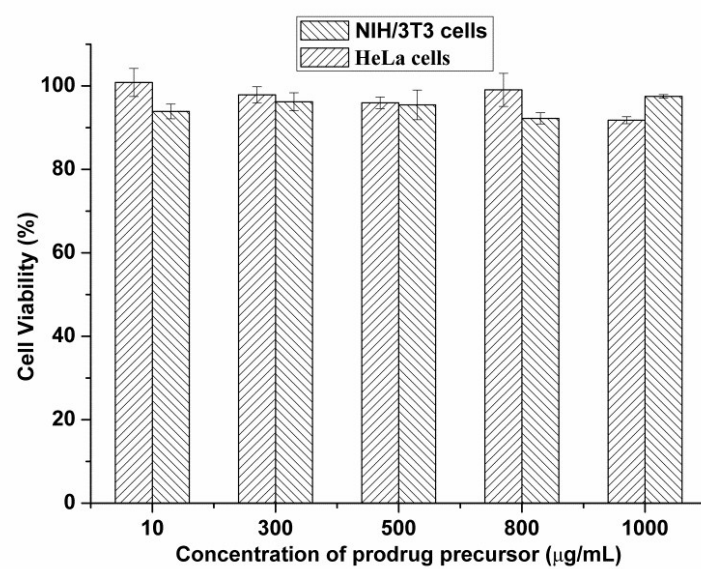


Fig. S4 The cell viability of NIH/3T3 and HeLa cells after co-incubation with prodrug precursor mPEG-TK-MTL for 48 h.

Table S1 Properties of DOX/mPEG-TK-DOX micelle.

DOX-loaded prodrug Micelles	Feeding ratios of DOX:mPEG-TK-DOX	DLCs	EEs	Sizes by DLS
1	20%:80%	16.0%	76.2%	195 nm
2	30%:70%	22.2%	65.8%	352 nm

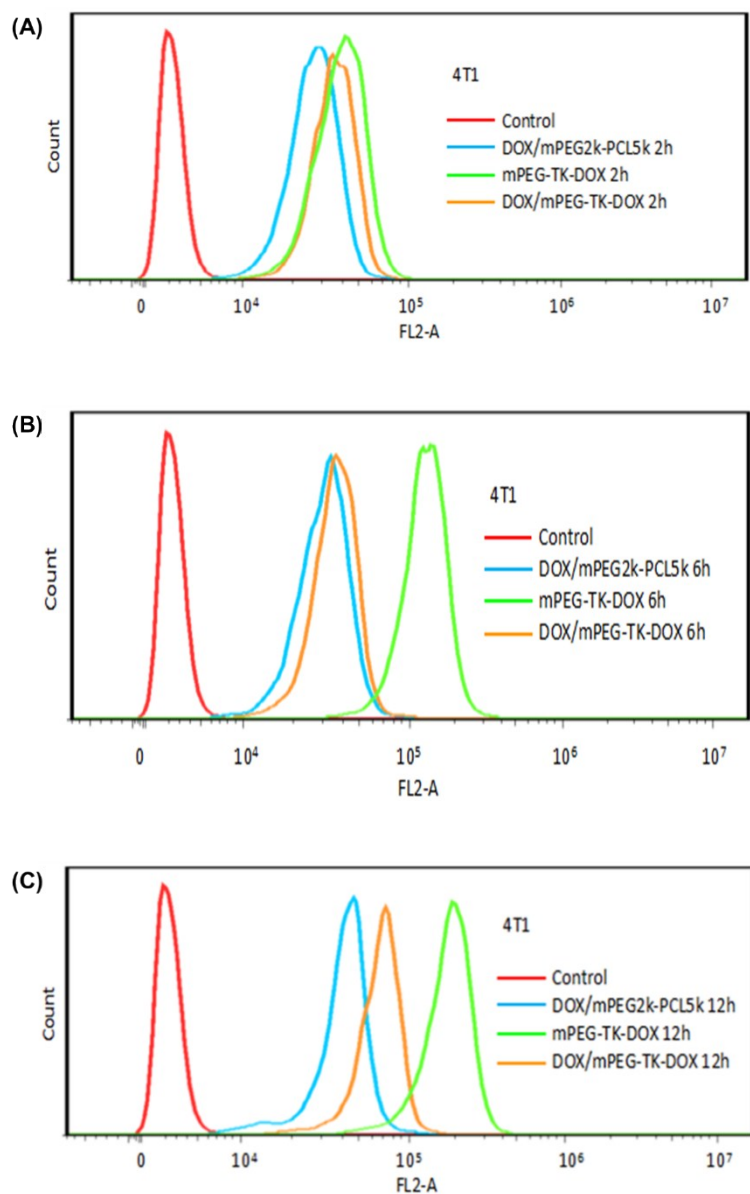


Fig. S5 Flow cytometry histogram profiles of 4T1 cells incubated with prodrug micelle, DOX-loaded prodrug micelle, and DOX-loaded mPEG2k-PCL5k micelle for 2 h (A), 6 h (B), and 12 h (C); the DOX concentration was 10 $\mu\text{g/mL}$.

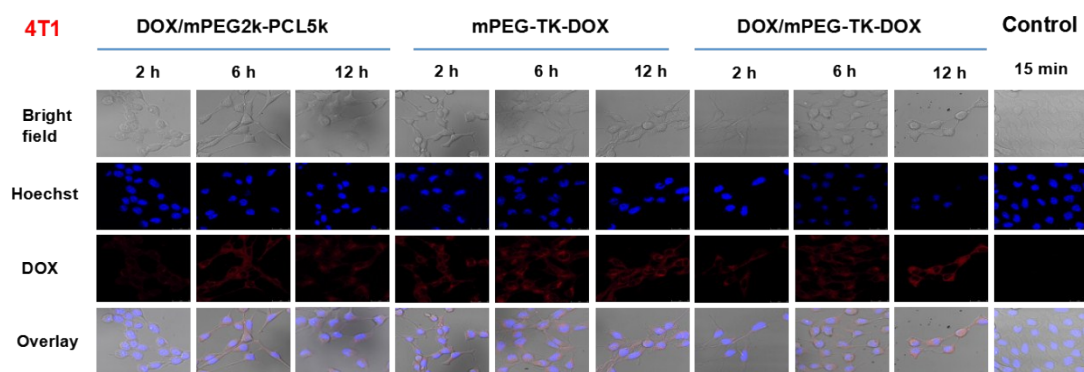


Fig. S6 The confocal laser scanning microscopy images of 4T1 cells treated with DOX-loaded mPEG2k-PCL5k micelle, prodrug micelle, and DOX-loaded prodrug micelle for 2, 6, and 12 h.

Cells that were stained by Hoechst alone for 15 min were used as a control.

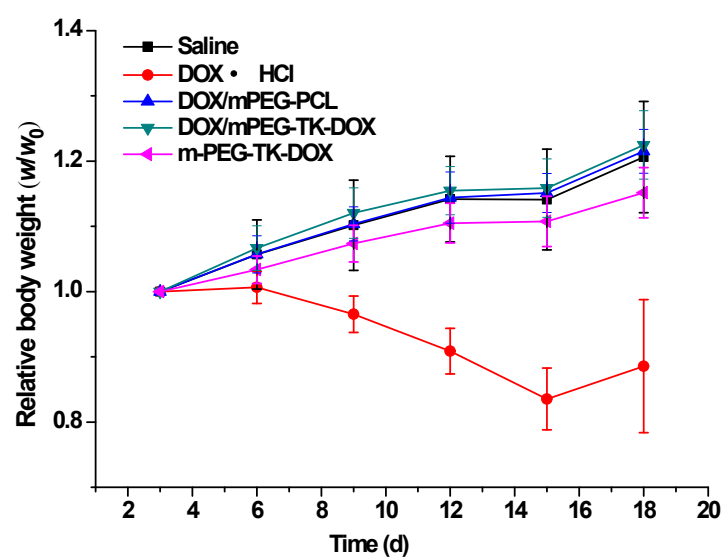


Fig. S7 Body weight changes of normal mice treated with formulations of saline, DOX·HCl, DOX-loaded mPEG2k-PCL5k micelle, prodrug micelles, and DOX-loaded prodrug micelle.

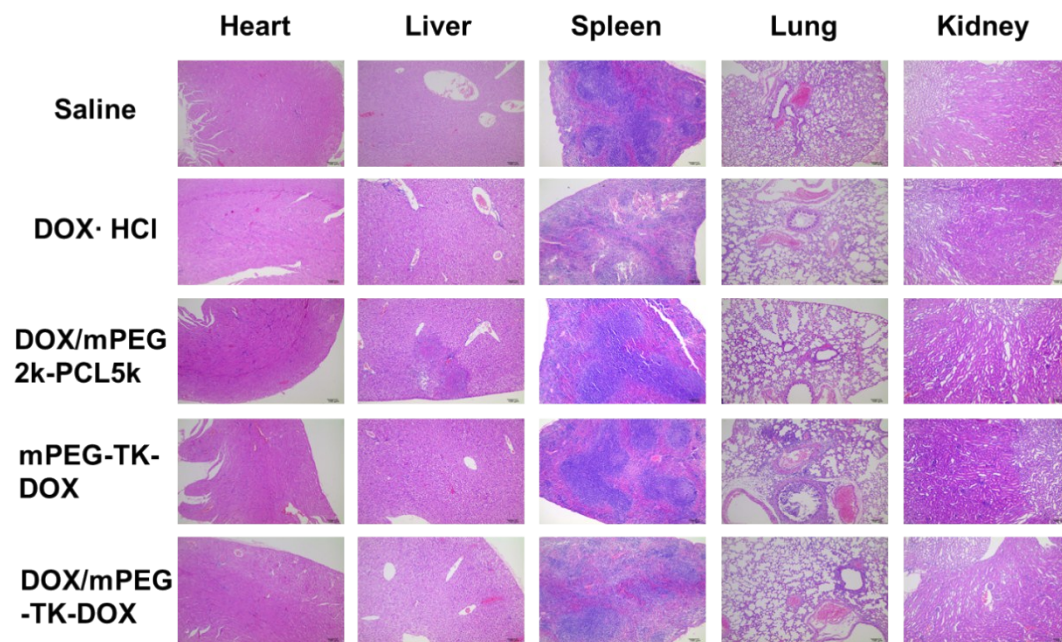


Fig. S8 The HE staining of heart, liver, spleen, lung, and kidney of normal mice treated with saline, DOX·HCl, DOX/mPEG2k-PCL5k, mPEG-TK-DOX, and DOX/mPEG-TK-DOX.