Supplementary Information

“Sheddable” PEG-Lipid to Balance the Contradiction of PEGylation between Long Circulation and Poor Uptake

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Scheme S1 Hydrolysis route of DSPE-Hy-PEG copolymer at acidic condition.
Fig. S1 (a) UV–vis absorption spectra of DOX; (b) UV–vis absorption spectra of DSPE-Hy-PEG.
Fig. S2 $^1$HNMR spectra of DSPE-Hy-PEG micelles incubated at pH 6.8 for 24 h.
Fig. S3 Viability of MCF-7 cells after incubation for 24 h with empty DSPE-Hy-PEG micelles at various concentrations.
Fig. S4 Emission spectra of DiO/Dil-loaded DSPE-Hy-PEG micelles diluted by water or methanol.
Fig. S5 (A) Hemolysis assay of empty micelles, using water as a positive control and saline as a negative control;
(B) CLSM images of Red blood cells incubated with empty micelles, using gel as a positive control and saline as a negative control.
**Fig. S6** Representative H&E sections of various organs of tumor-bearing nude mice after treatment with various drug formulations (DSPE-PEG represented by DP, DSPE-Hy-PEG represented by DHP).