

Electronic Supplementary Information (ESI)

for

Galactosylated Reduction and pH Dual-Responsive Triblock Terpolymer Gal-PEEP-*α*-PCL-*ss*-PDMAEMA: a Multifunctional Carrier for Targeted and Simultaneous Delivery of Doxorubicin and DNA

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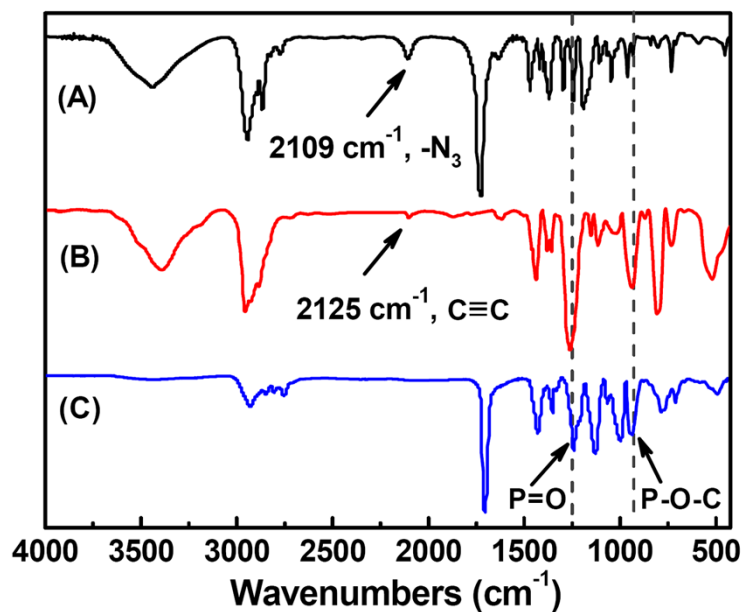
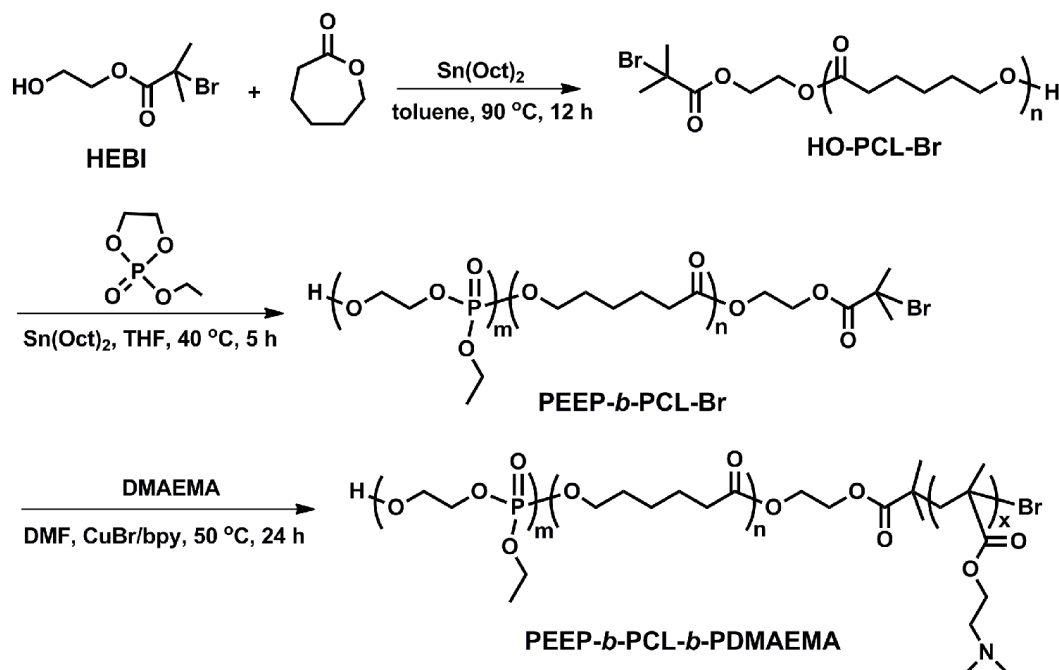


Fig. S1 FT-IR spectra of (A) N_3 -*a*-PCL₅₇-*ss*-PDMAEMA₂₈, (B) Propargyl-PEEP₃₃ and (C) Gal-PEEP₃₃-*a*-PCL₅₇-*ss*-PDMAEMA₂₈.



Scheme S1 Synthesis route of triblock terpolymer PEEP-*b*-PCL-*b*-PDMAEMA without acetal and disulfide linkages.

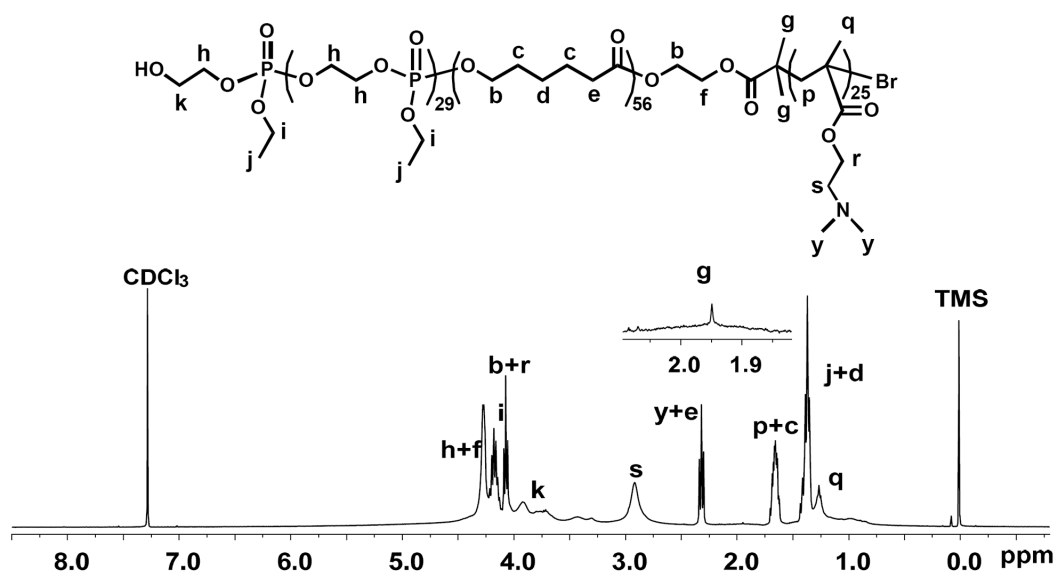


Fig. S2 ¹H NMR spectrum of triblock terpolymer PEEP₃₀-*b*-PCL₅₆-*b*-PDMAEMA₂₅.

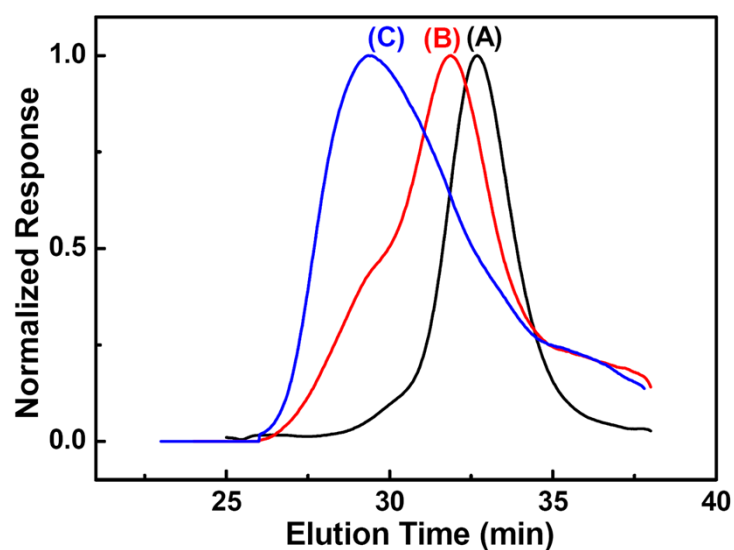


Fig. S3 GPC curves of (A) HO-PCL₅₆-Br ($\overline{M}_{n, GPC} = 9870 \text{ g mol}^{-1}$, PDI = 1.06), (B) PEEP₃₀-*b*-PCL₅₆-Br ($\overline{M}_{n, GPC} = 11820 \text{ g mol}^{-1}$, PDI = 1.12), and (C) PEEP₃₀-*b*-PCL₅₆-*b*-PDMAEMA₂₅ ($\overline{M}_{n, GPC} = 15500 \text{ g mol}^{-1}$, PDI = 1.15).

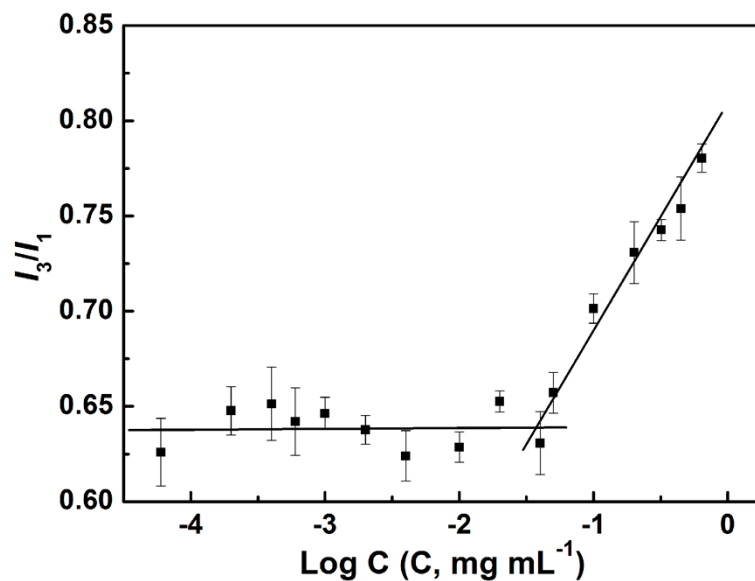


Fig. S4 Intensity ratios (I_3/I_1) in fluorescence emission spectra of pyrene as a function of logarithm concentrations of triblock terpolymer Gal-E₃₃-*a*-C₅₇-*ss*-D₂₈ in pH 7.4 buffer solution.

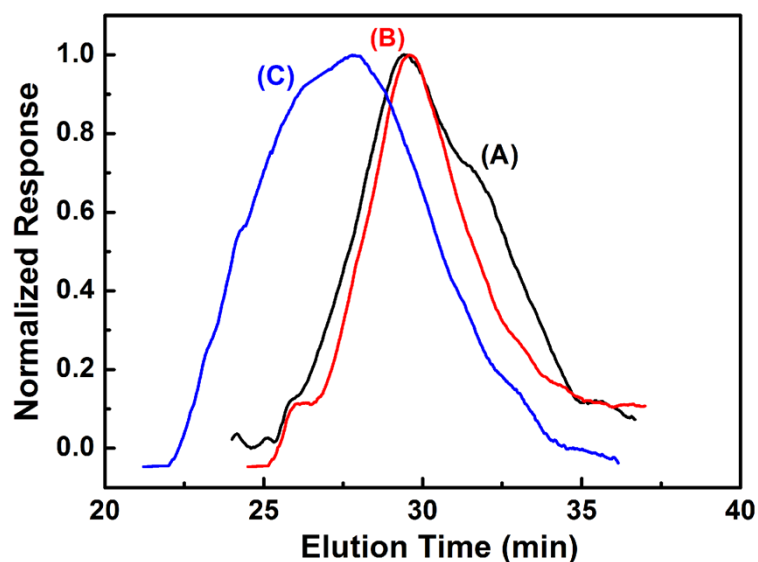


Fig. S5 GPC curves of (A) GSH-triggered degradation products and (B) pH-triggered degradation products of Gal-E₃₃-*a*-C₅₇-*ss*-D₂₈, as well as (C) the original Gal-E₃₃-*a*-C₅₇-*ss*-D₂₈.

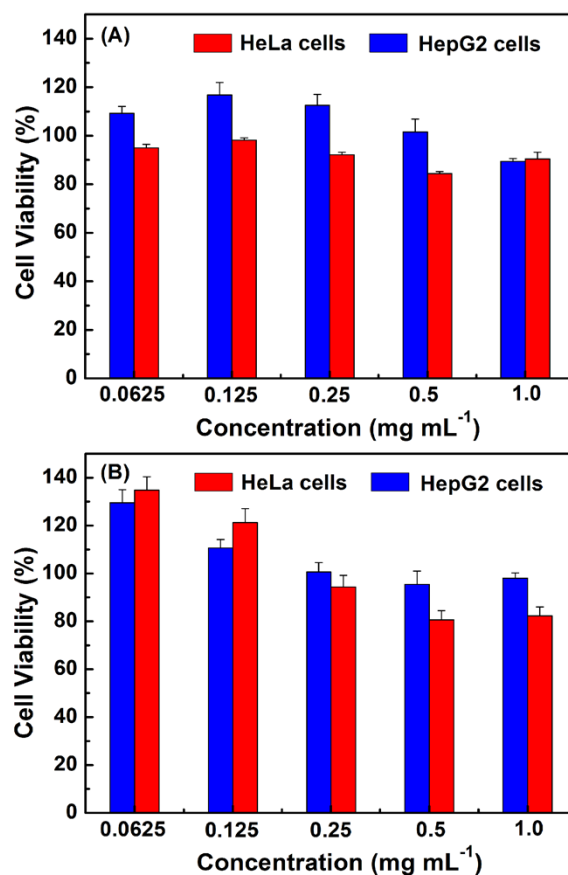


Fig. S6 Cell viability of HeLa cells and HepG2 cells incubated with (A) GSH-triggered degradation products and (B) pH-triggered degradation products of Gal-E₃₃-*a*-C_{57-ss}-D₂₈ at various concentrations for 48 h.

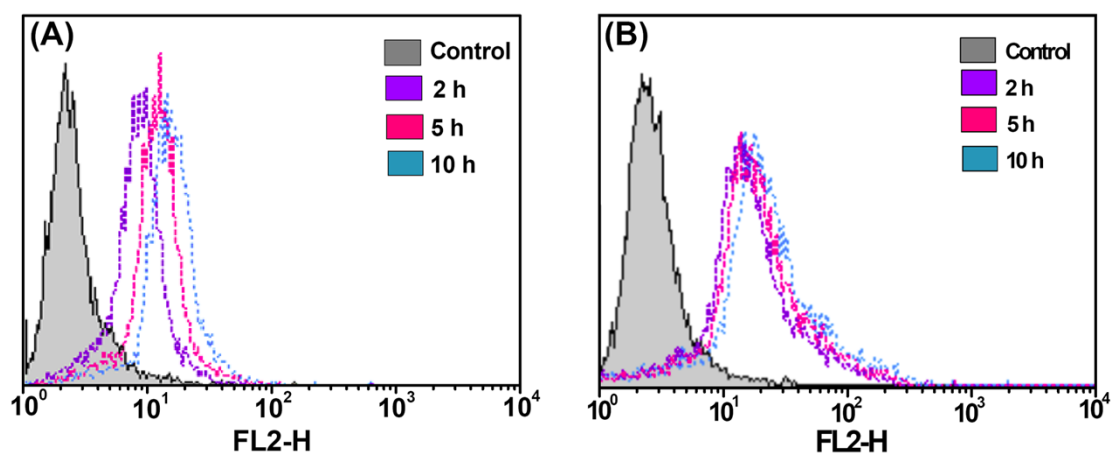


Fig. S7 Flow cytometry profiles of (A) HeLa cells and (B) HepG2 cells treated with DOX-loaded Gal-E₃₃-*a*-C_{57-ss}-D₂₈ micelles (final DOX concentration was 0.3 mg L⁻¹)

for different incubation time.