

Supporting Information

Dual Responsive Hyaluronic Acid Graft Poly(ionic liquid) Block Copolymer Micelle for Efficient CD44 Targeted Antitumor Drug Delivery

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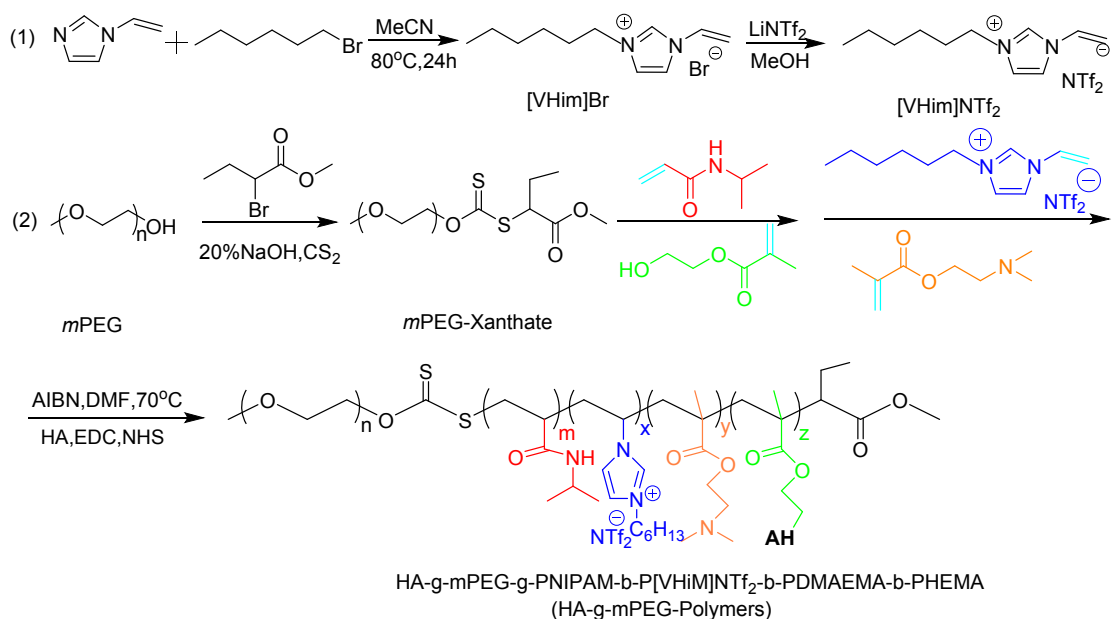


Fig. S 1 Synthesis of block copolymer HA-g-*m*PEG-g-PNIPAM-*b*-P[VHim]NTf₂-*b*-PDMAEMA-*b*-PHEMA (HA-g-*m*PEG-g-Polymer) by reversible addition and fragmentation chain transfer (RAFT) method

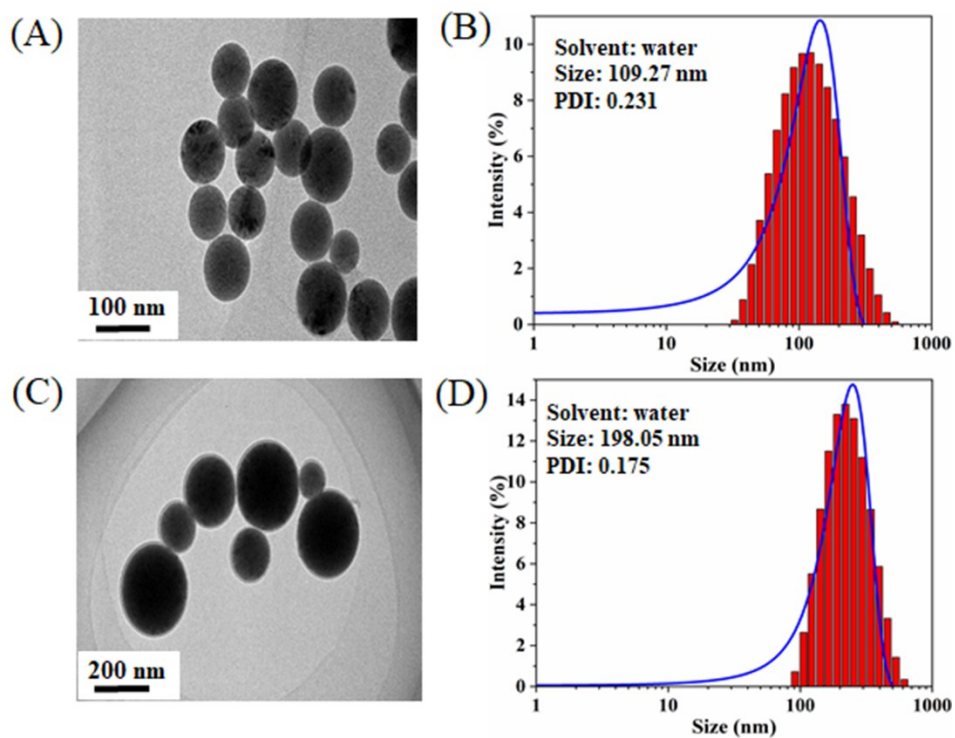


Fig. S 2 TEM (A and C) and particle size distribution curves (B and D) of *m*PEG-polymers-1 and *m*PEG-polymers @DOX-1 micelles in aqueous media, the data are shown as mean \pm SD ($n = 3$)

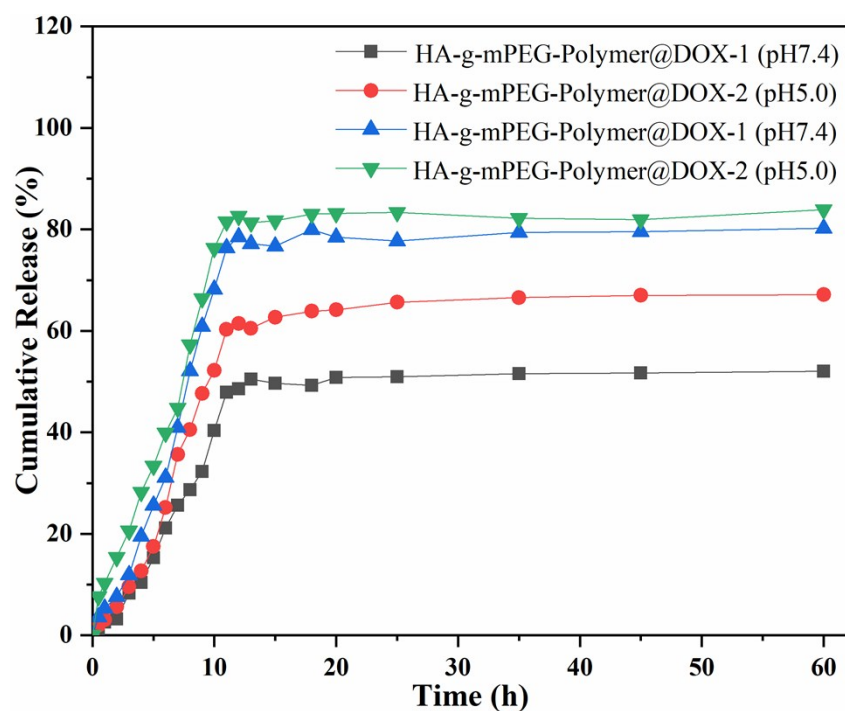


Fig. S 3 *In vitro* DOX release curves for HA-g-mPEG-Polymer@DOX micelles at 50°C under pH 7.4 and pH 5.0

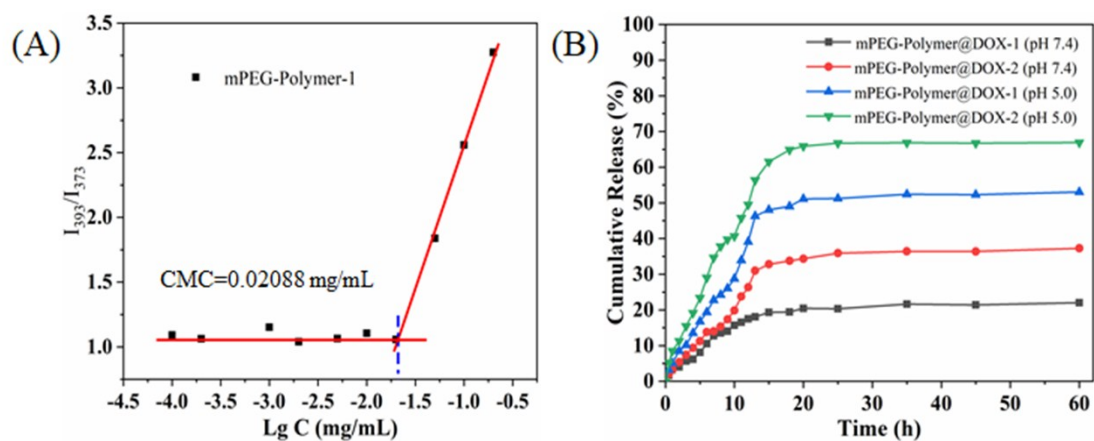


Fig. S 4 (a) Fluorescence intensity ratio I_{393}/I_{373} of pyrene as a function of mPEG-Polymer-1 micelles concentration in water. (d) *In vitro* DOX release curves for mPEG-Polymer@DOX micelles at 37°C under pH 7.4 and pH 5.0

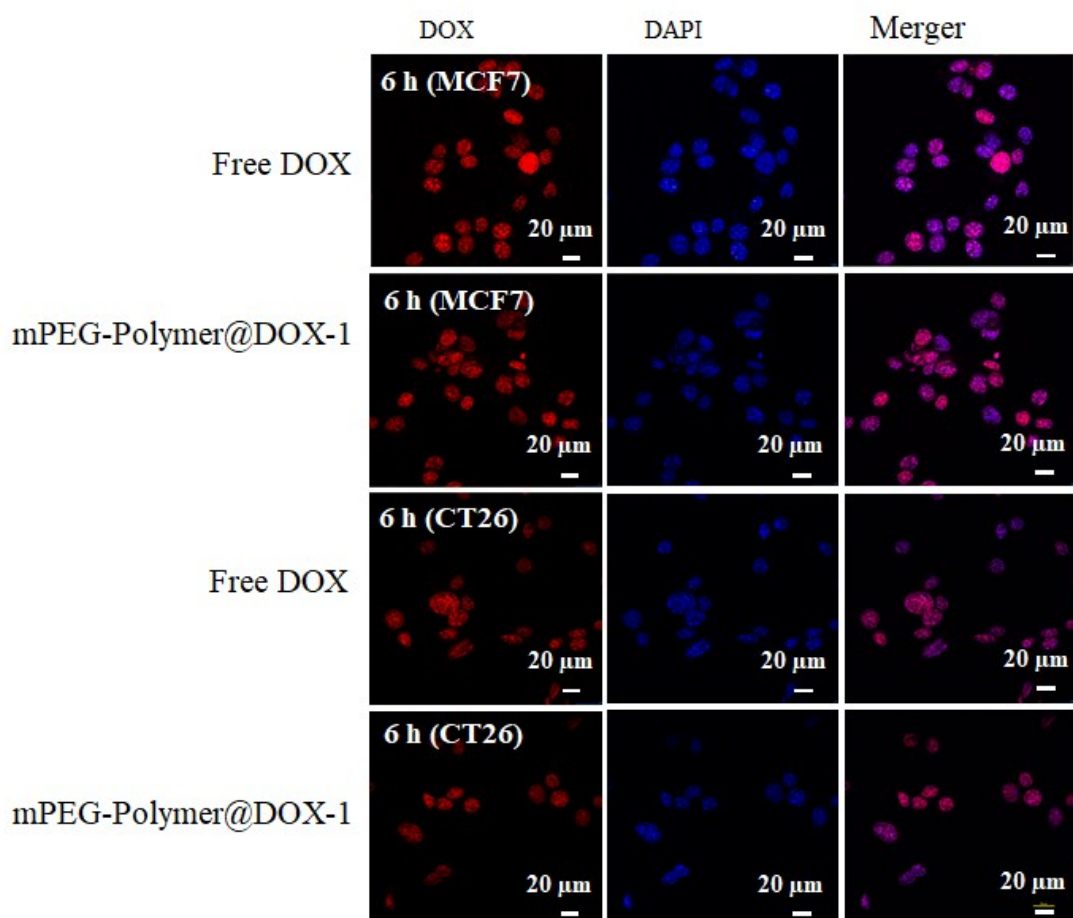


Fig. S 5 CLSM images of MCF-7 and CT26 cells treated with mPEG-Polymer @DOX micelles (DOX equivalent amount of 1 mg/mL) at 6 h, respectively. (Scale bars: 20 μm)

Table S 1 Fluorescence intensity of MCF-7 (Fig. 5B) and CT26 (Fig. 5C) cells incubated with control group, free DOX, HA-g-mPEG-Polymer@DOX-1, and mPEG-Polymer for@DOX-1 for 1 or 4 h

Groups	Fluorescence intensity (MCF-7 cells)	Fluorescence intensity (CT26 cells)
Control	2.471±0.19	0.936±0.18
Free DOX (1 h)	19.96±1.78	6.11±4.09
HA-g-mPEG-Polymer-1 (1 h)	47.71±2.13	23.74±1.75
mPEG-Polymer-1 (1 h)	36.12±4.46	13.93±1.44
Free DOX (4 h)	74.29±4.35	45.94±4.26
HA-g-mPEG-Polymer-1 (4 h)	153.79±3.02	79.85±3.60
mPEG-Polymer-1 (4 h)	104.89±4.57	56.71±5.96