

Supporting Information

of

A co-delivery system based on reduction-sensitive polymeric prodrug capable of loading hydrophilic and hydrophobic drugs for combination chemotherapy

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Table S1. The IC₅₀ (mg/L) of free PTX and prodrug nanoparticles against HeLa and MCF-7/ADR cells for 48 h incubation time.

Cells	PTX	DOX•H Cl	UCL- PMP-1	UCL- PMP-2	UCL- PMP-3	CL- PMP-1	CL- PMP-2	CL- PMP-3
HeLa	7.03	0.445	12.2	13.0	12.0	11.7	12.0	12.8
MCF-7/ADR	40.8	113	59.5	53.8	68.9	66.1	70.8	69.5

Table S2. Times for 50% drug release ($t_{1/2}$) calculated based on zero order drug release kinetics. Curve-fitting was done by linear regression using the means of triplicate experiments for PMPs nanoparticles in the presence of 10 mM DTT.

UCL-PMP-1		UCL-PMP-2		UCL-PMP-3		CL-PMP-1		CL-PMP-2		CL-PMP-3	
$t_{1/2}$ (h)	r^2	$t_{1/2}$ (h)	r^2	$t_{1/2}$ (h)	r^2	$t_{1/2}$ (h)	r^2	$t_{1/2}$ (h)	r^2	$t_{1/2}$ (h)	r^2
40.3	0.958	43.4	0.989	40.9	0.941	38.3	0.982	40.1	0.997	42.7	0.982

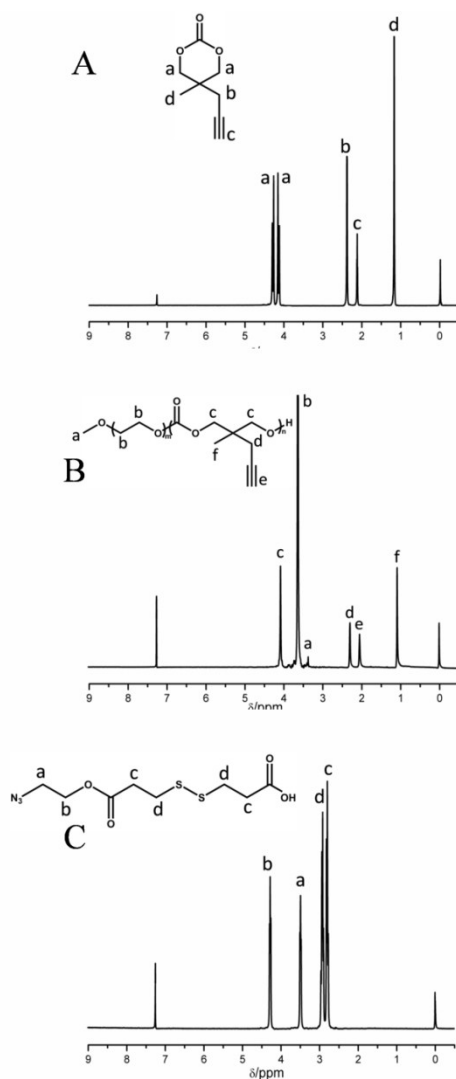


Fig. S1. ¹H NMR spectra (300 MHz, CDCl₃) of MPMC (A), PEG-*b*-PMPMC (B) and ASA (C).

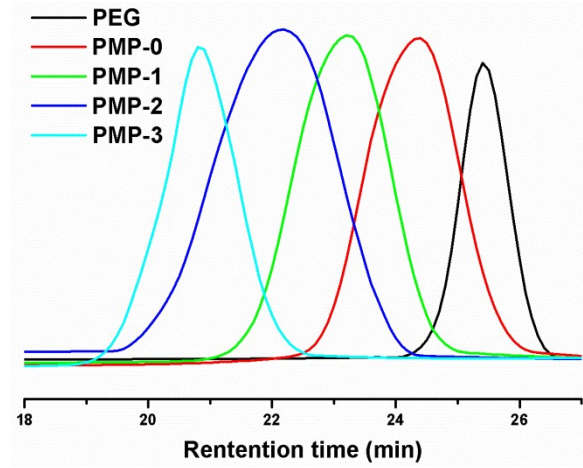


Fig. S2. GPC traces of PEG, PMP-0, PMP-1, PMP-2 and PMP-3.

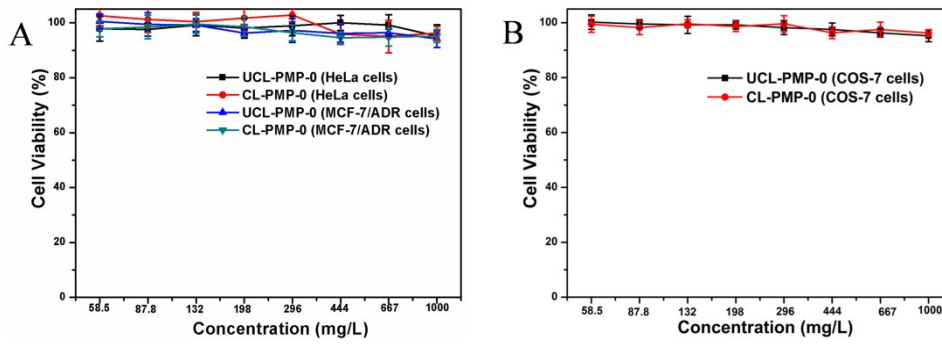


Fig. S3. MTT assay of UCL-PMP-0 and CL-PMP-0 blank micelles in HeLa cells and MCF-7/ADR cells (A), and COS-7 cells (B) after incubation for 48 h.

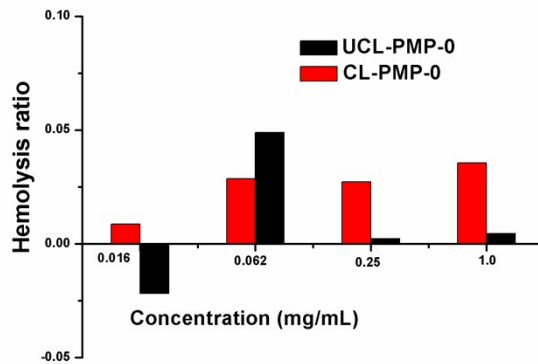


Fig. S4. The hemolysis ratio induced by UCL-PMP-0 and CL-PMP-0 with different concentration incubated at 37 °C for 3 h.

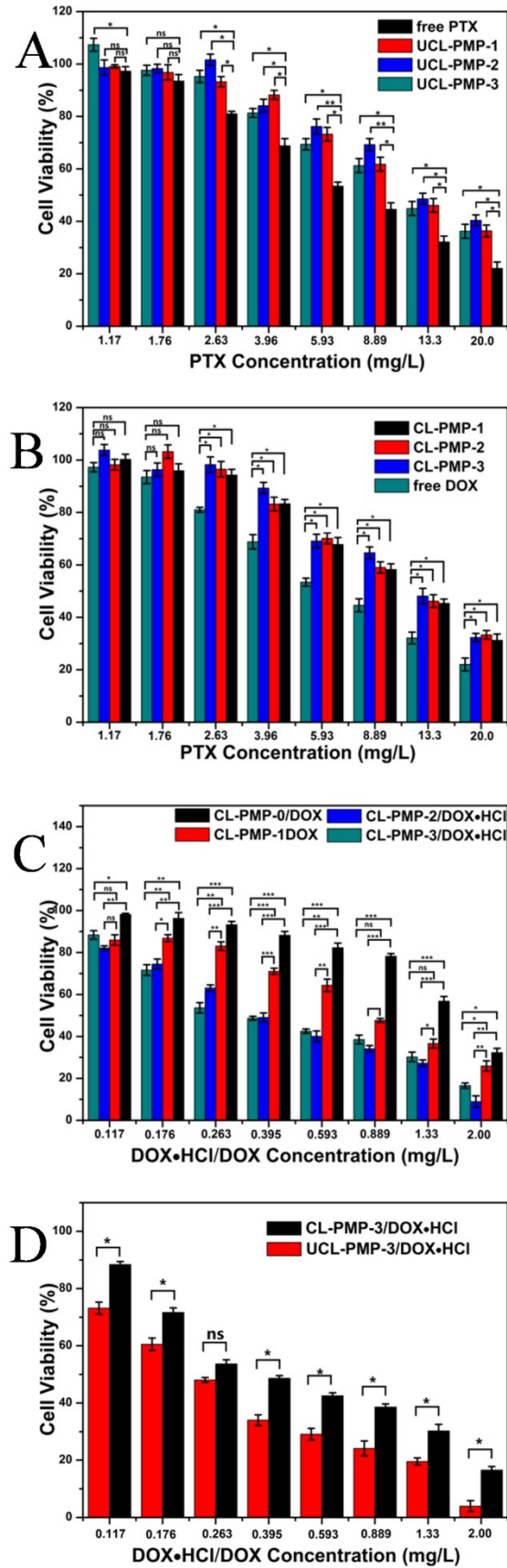


Fig. S5. Statistical analysis of MTT assay of free PTX and PMPs nanoparticles in HeLa cells after incubation for 48 h. (* $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$, ns = not significant)

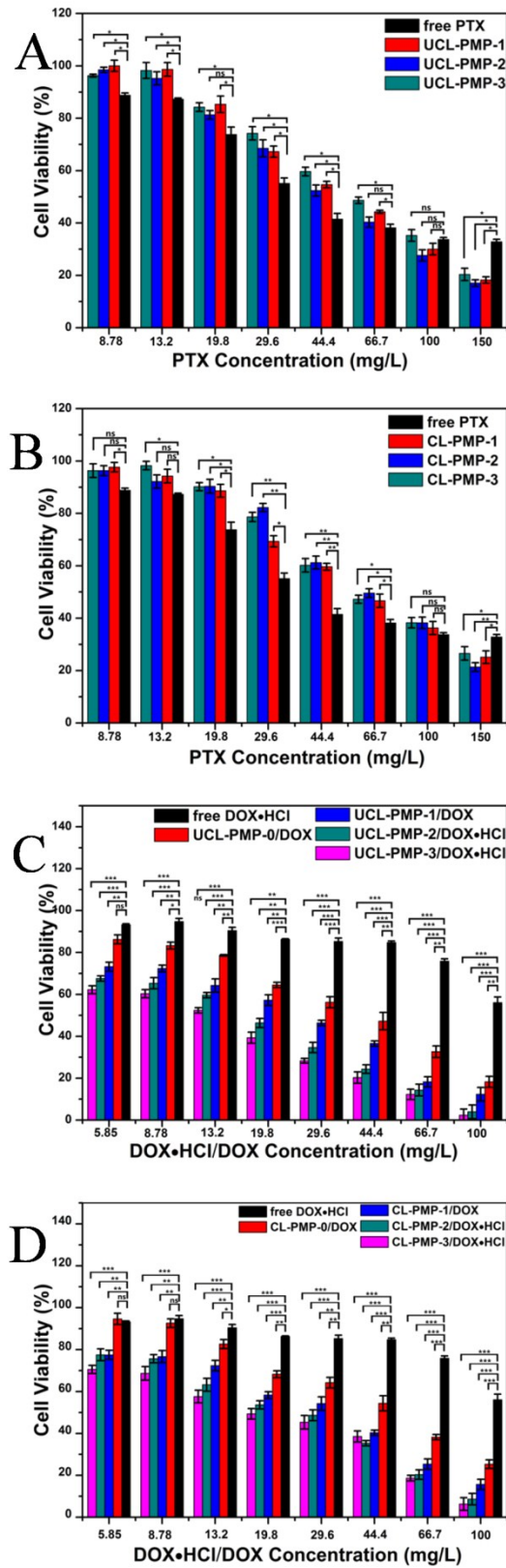


Fig. S6. Statistical analysis of MTT assay of free PTX and PMPs nanoparticles in MCF-7/ADR cells after incubation for 48 h. (* $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$, ns = not significant)