

# Biocompatible Supramolecular Pseudorotaxane Hydrogel for Controllable Release Doxorubicin in Ovarian Cancer SKOV-3 Cells

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( $\gamma=0.05\%$  or 100%)

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Table S1 The composition for the DOX-loaded hydrogels

Blank Hydrogels	$\alpha$ -CD	2N- $\beta$ -CD	F127
1	20 %	1 %	5 %
2	14.5 %	2 %	5 %
3	20%	3%	5%
4	20%	4%	5%
5	14.5%	4%	5%
6	20%	8%	5 %

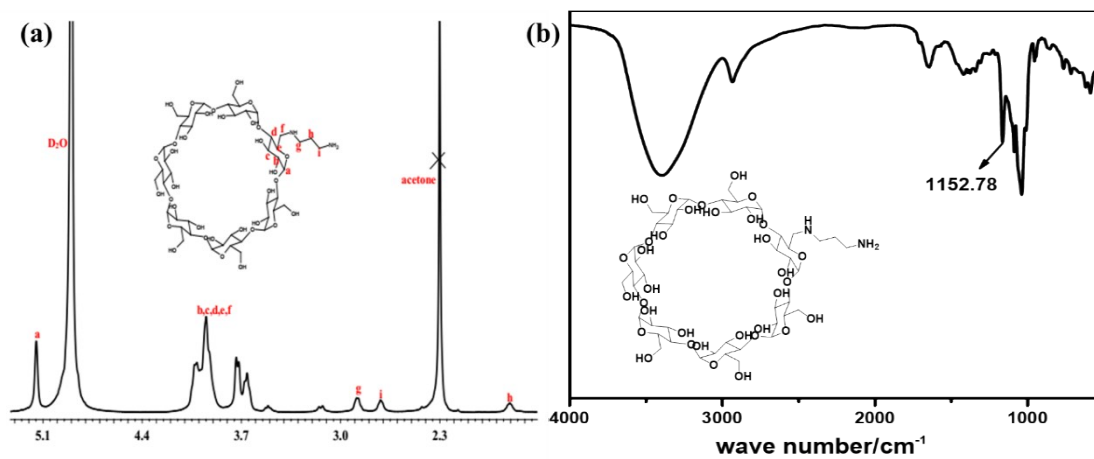
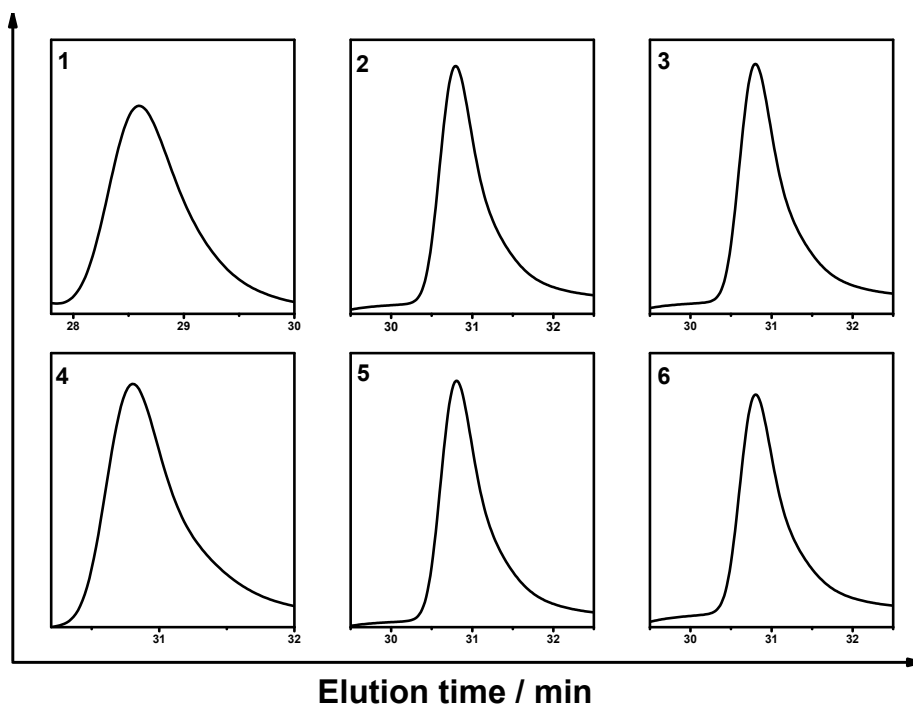
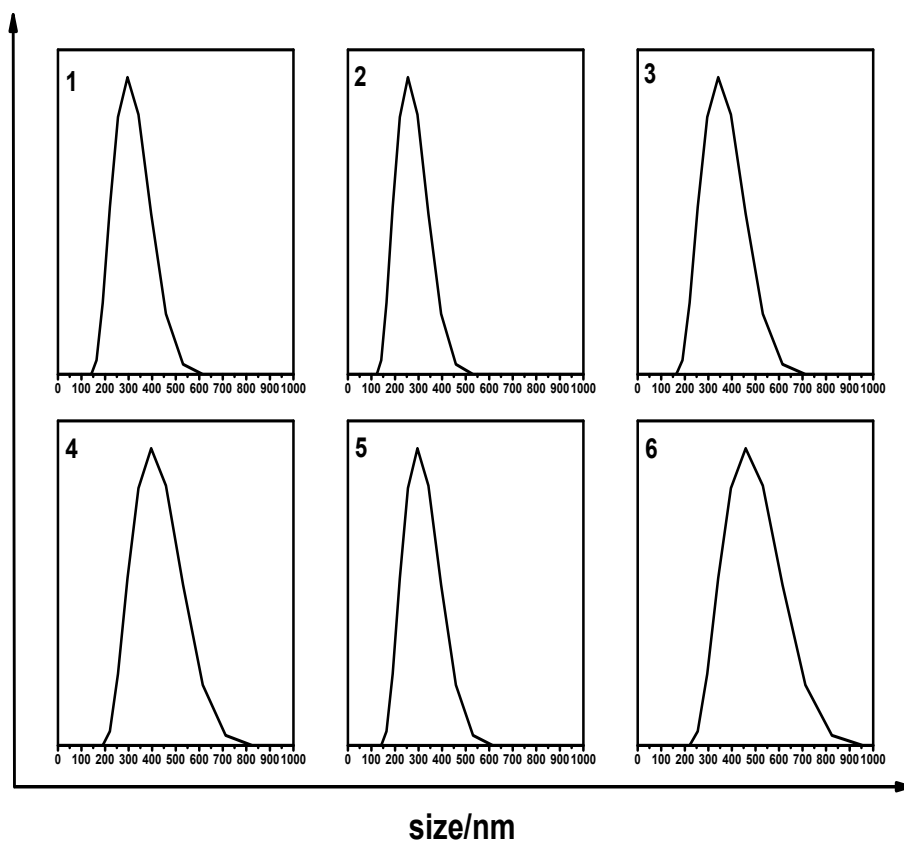


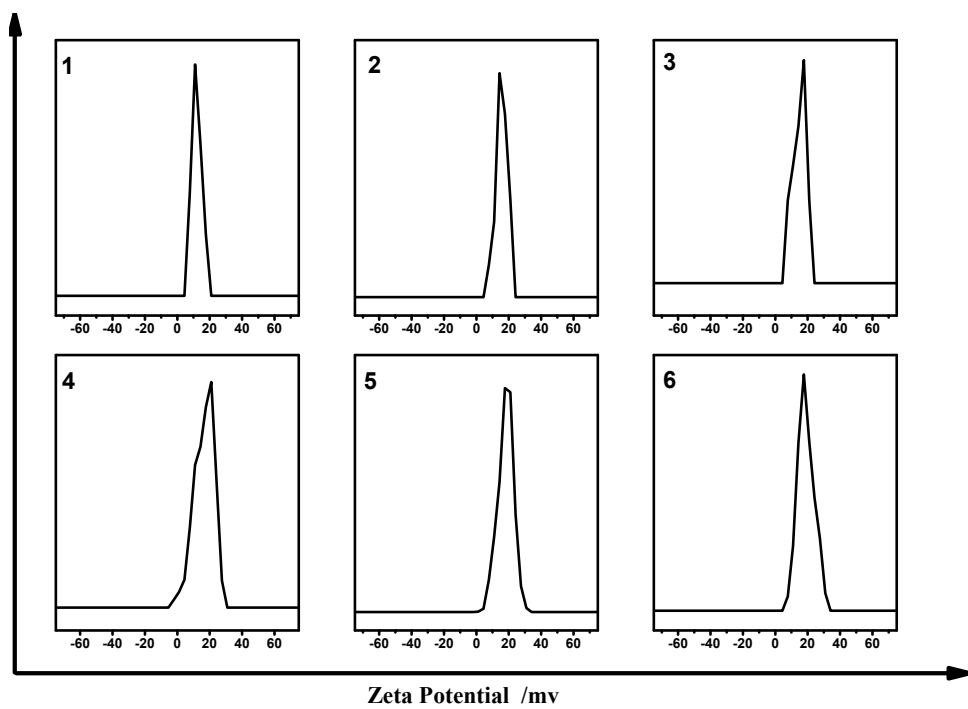
Figure S1  $^1\text{H}$  NMR spectrum of 2N- $\beta$ -CD in  $\text{D}_2\text{O}$  (a), FT-IR spectrum of 2N- $\beta$ -CD (b).



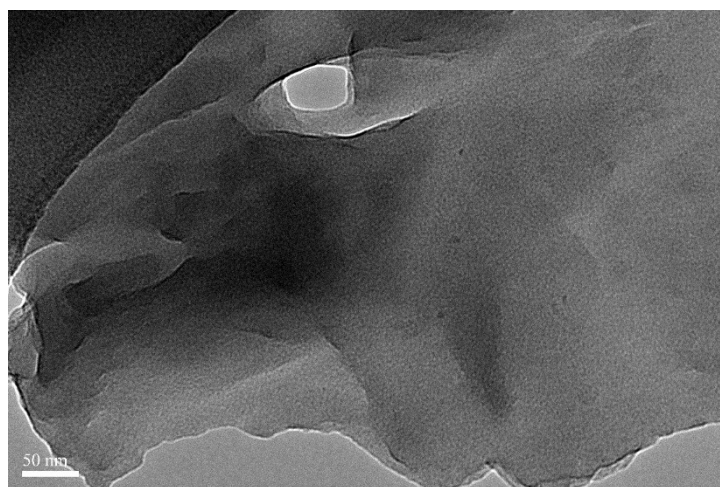
**Figure S2.** GPC chromatogram of prodrug hydrogels (1 mg/mL in 1 mol/L aqueous  $\text{NaNO}_3$ ).



**Figure S3.** The sizes of prodrug hydrogels obtained with different DOX content ( $n = 3$ ).



**Figure S4.** Zeta potentials of prodrug hydrogels obtained with different DOX content (n = 3).



**Figure S5.** TEM images of DOX-loaded hydrogel 2.

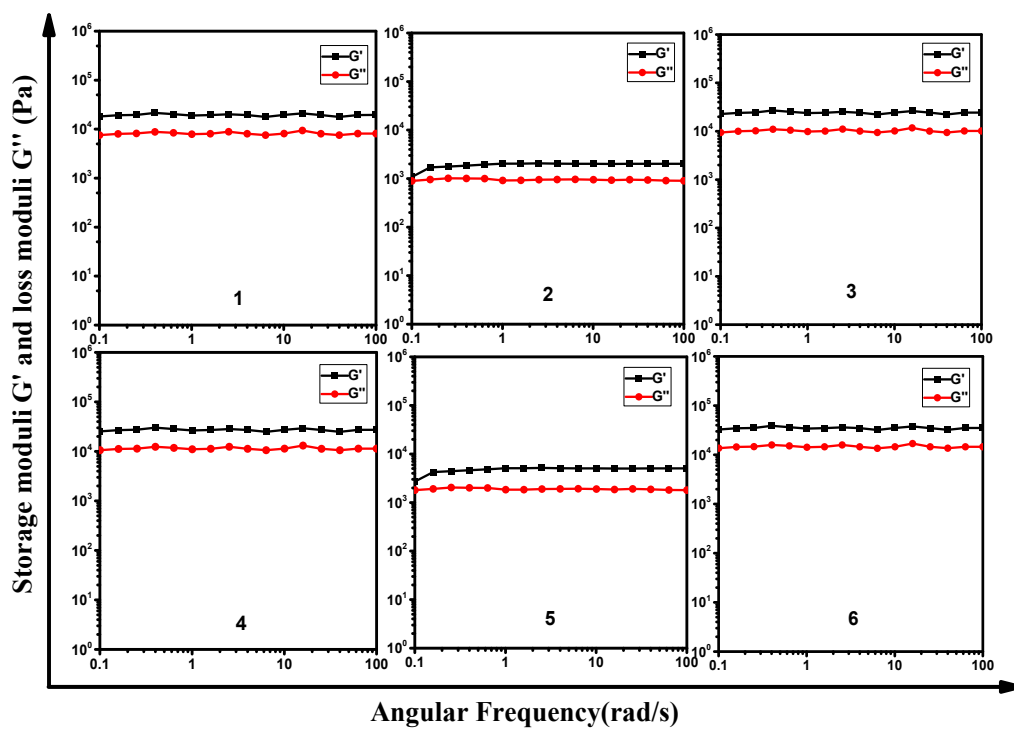


Figure S6. Angular frequency sweep profiles of hydrogel 1-6.

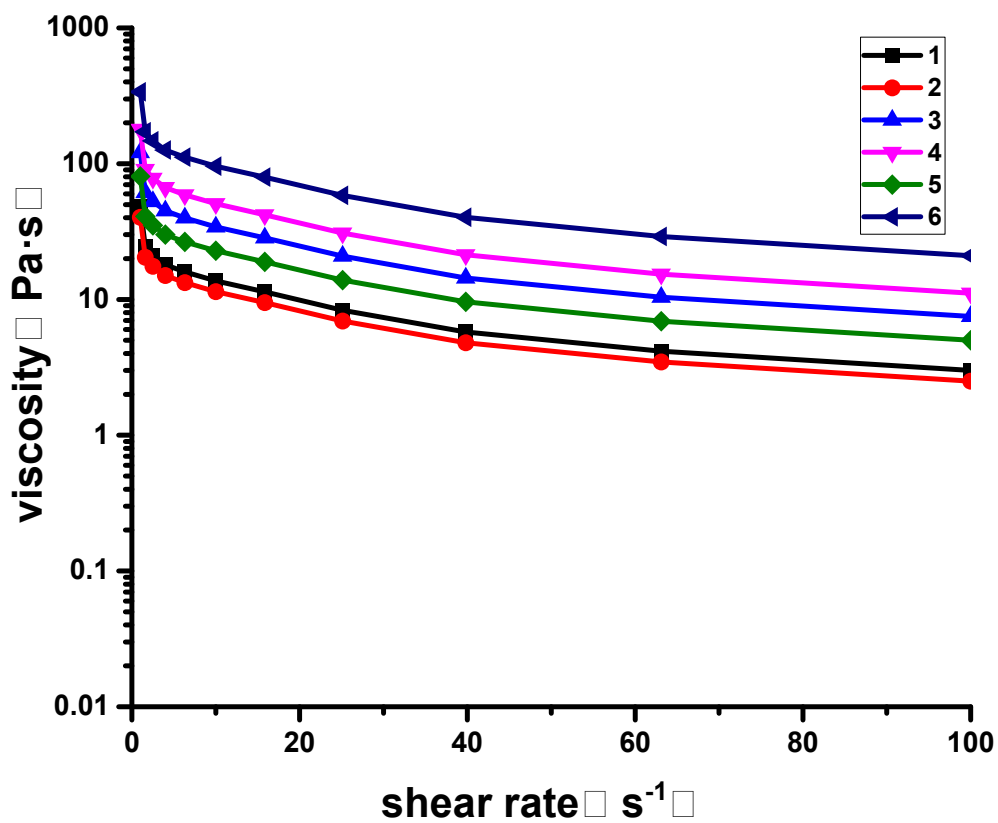


Figure S7. Steady shear rate sweep profiles of hydrogel 1-6.

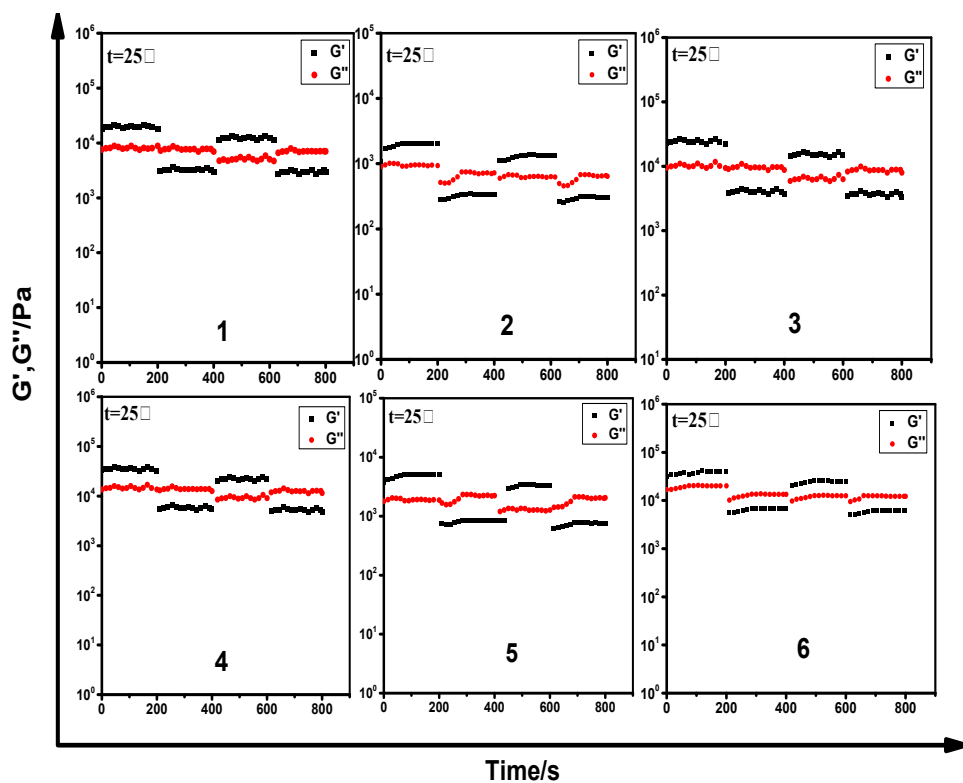


Figure S8 Dynamic step strain amplitude test of hydrogels at 25 °C two weeks later. ( $\gamma=0.05\%$  or  $100\%$ )

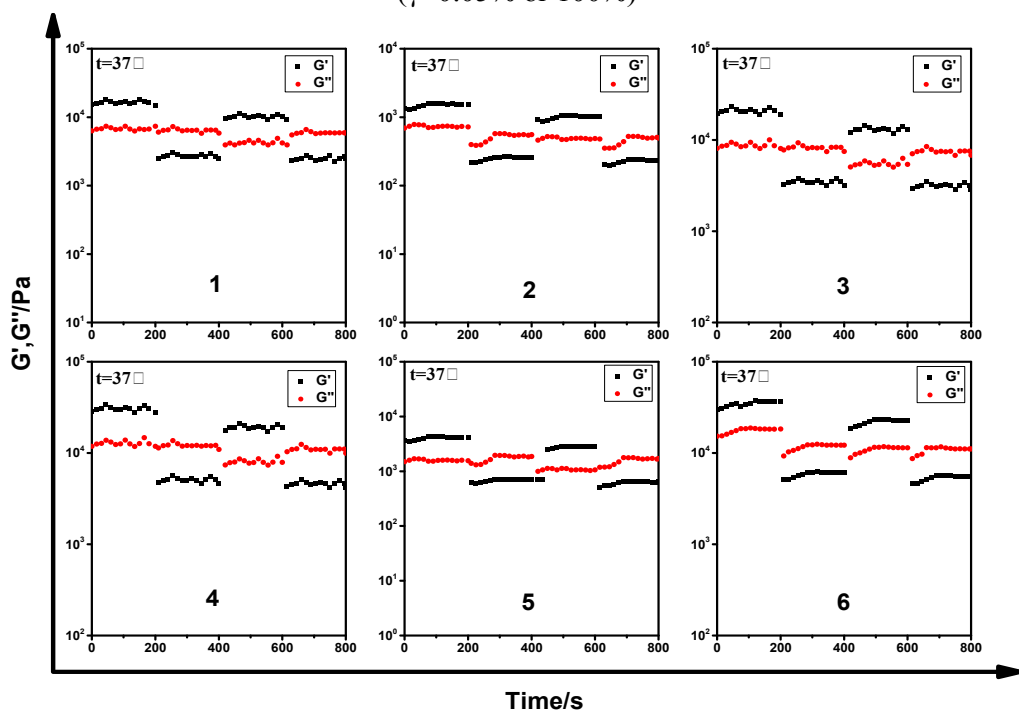
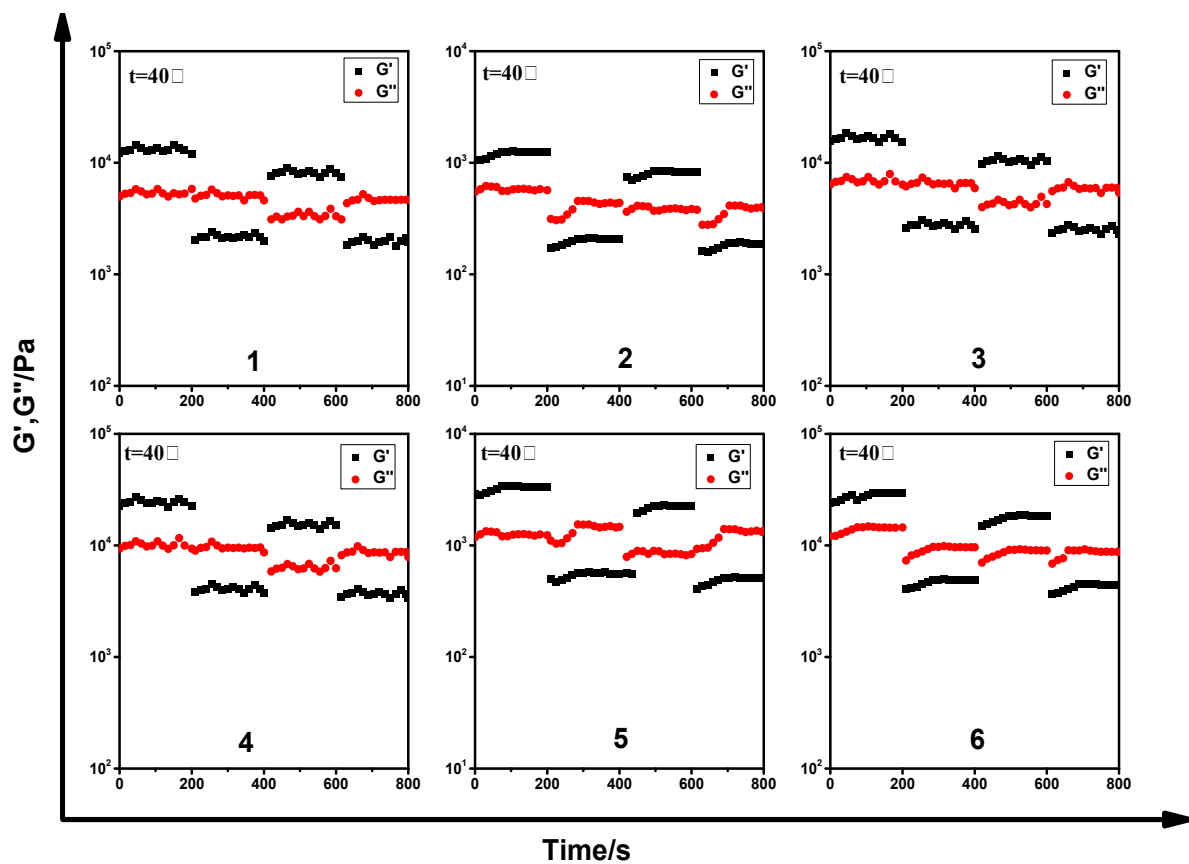


Figure S9 Dynamic step strain amplitude test of hydrogels at 37 °C. ( $\gamma=0.05\%$  or  $100\%$ ) two weeks later.



**Figure S10** Dynamic step strain amplitude test of hydrogels at 40 °C. ( $\gamma=0.05\%$  or  $100\%$ ) two weeks later.



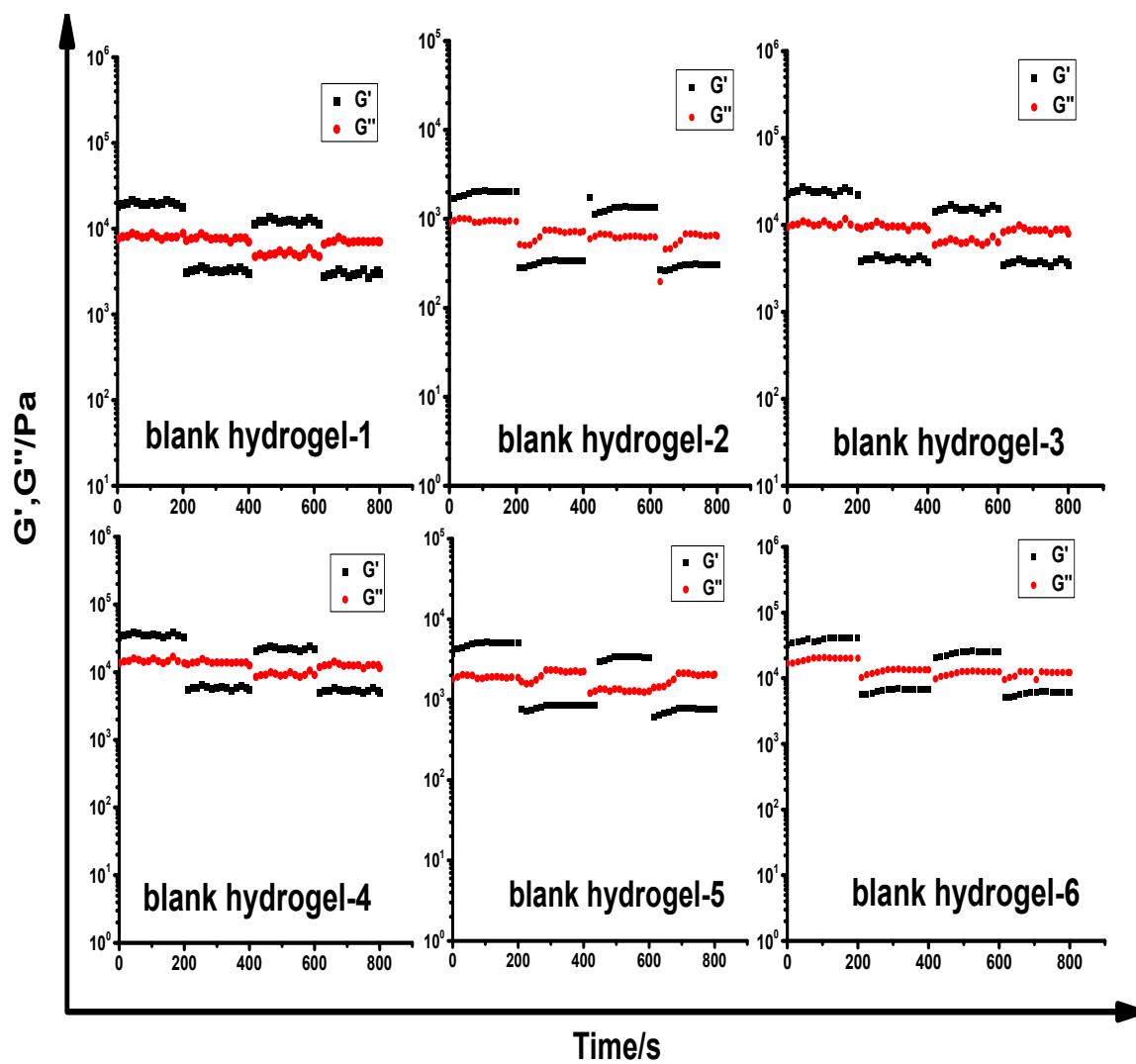


Figure S11 Dynamic step strain amplitude test of blank hydrogels without DOX ( $\gamma=0.05\%$  or  $100\%$ )

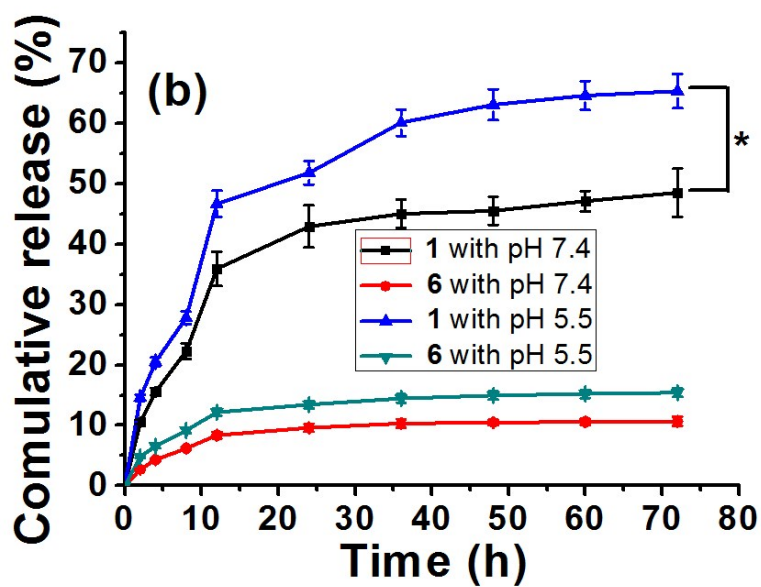
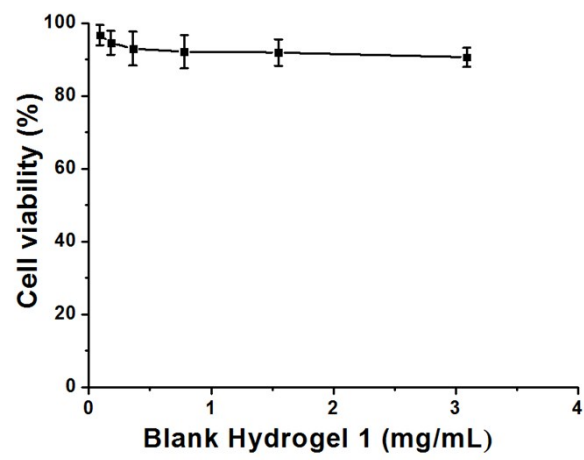


Figure S12 The release of DOX from the DOX-loaded hydrogel 1 and 6 under different pH

conditions two weeks later. The data is shown as the mean  $\pm$  SD (n = 6) with \*P < 0.05.



**Figure S13** Cell viability of SKOV-3 cells treated with different concentrations of blank hydrogel

1.