Supplementary Information

Hydrogen peroxide-responsive anticancer hyperbranched polymer micelles for enhanced cell apoptosis

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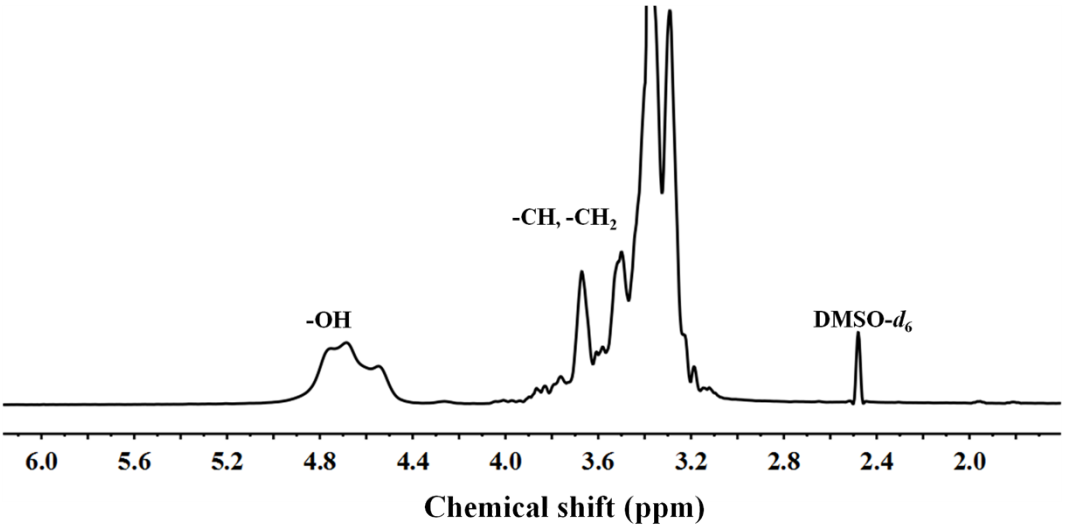

Figure S1. ^{1}H NMR spectrum of HPG in DMSO-d_6 (400 MHz, 298 K).

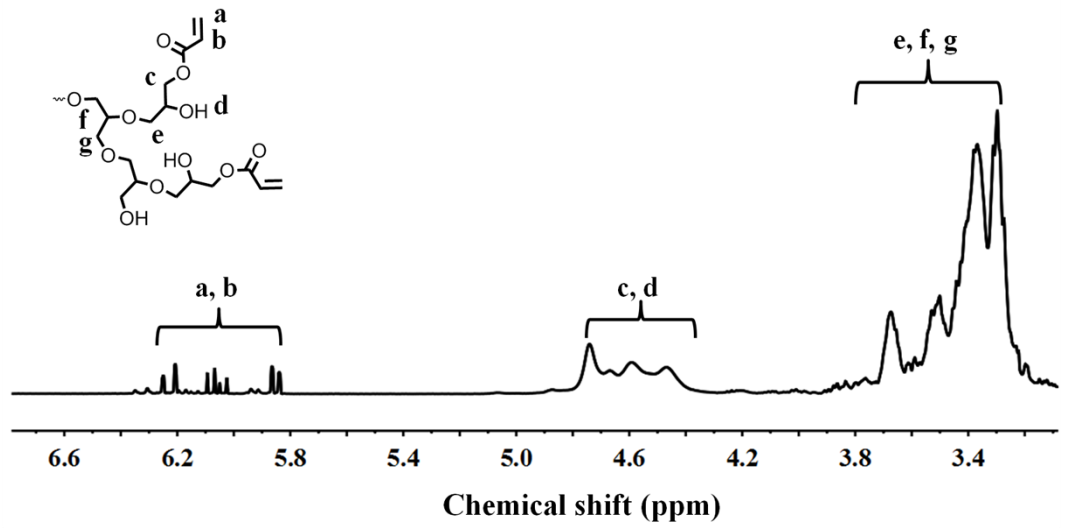

Figure S2. ^{1}H NMR spectrum of acryloyl-terminated HPG in DMSO-d_6 (400 MHz, 298 K).

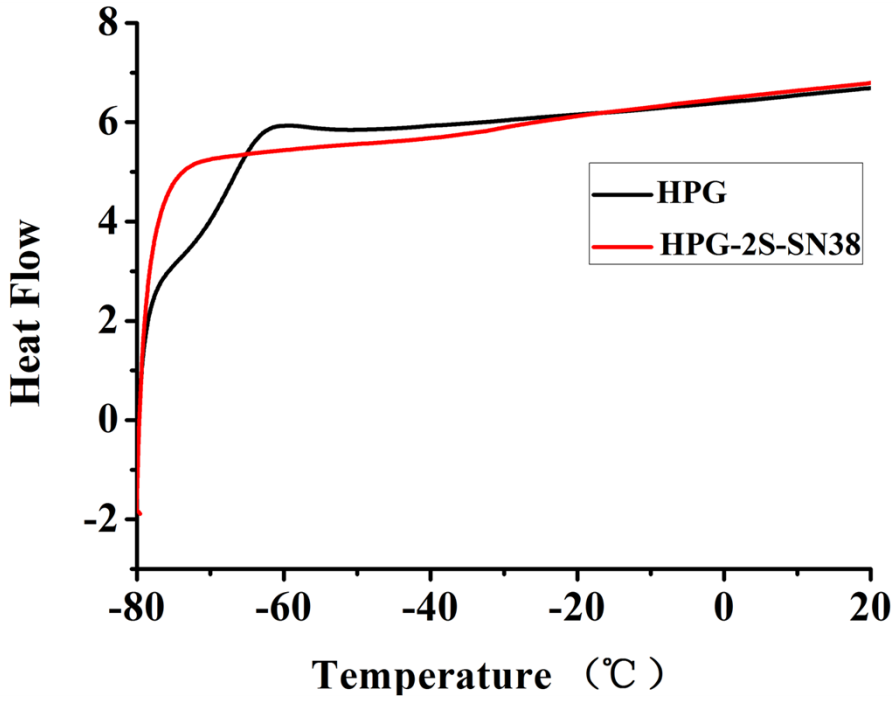

Figure S3. Representative DSC curves of HPG and HPG-2S-SN38.

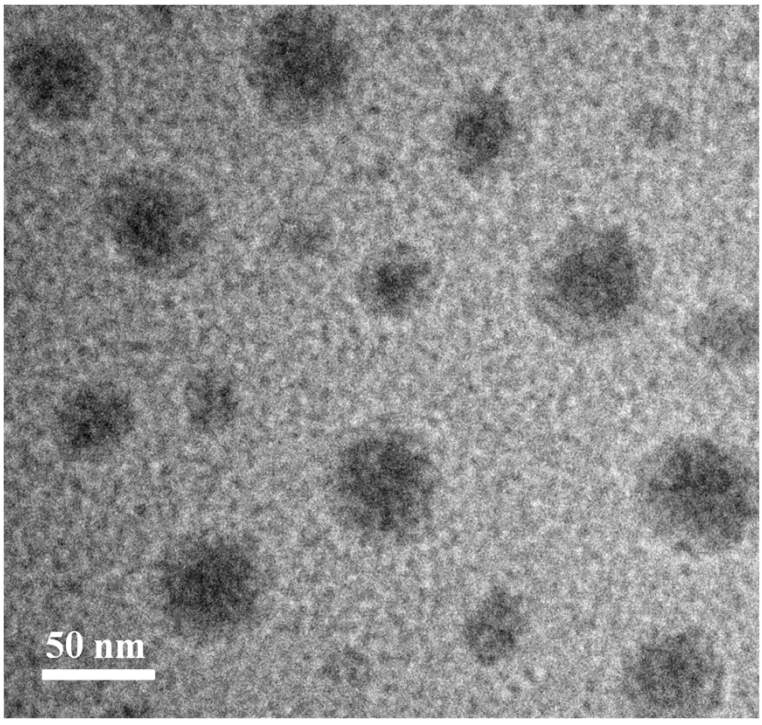

Figure S4. The TEM image of the CA-loaded HPG-2S-SN38 micelles.

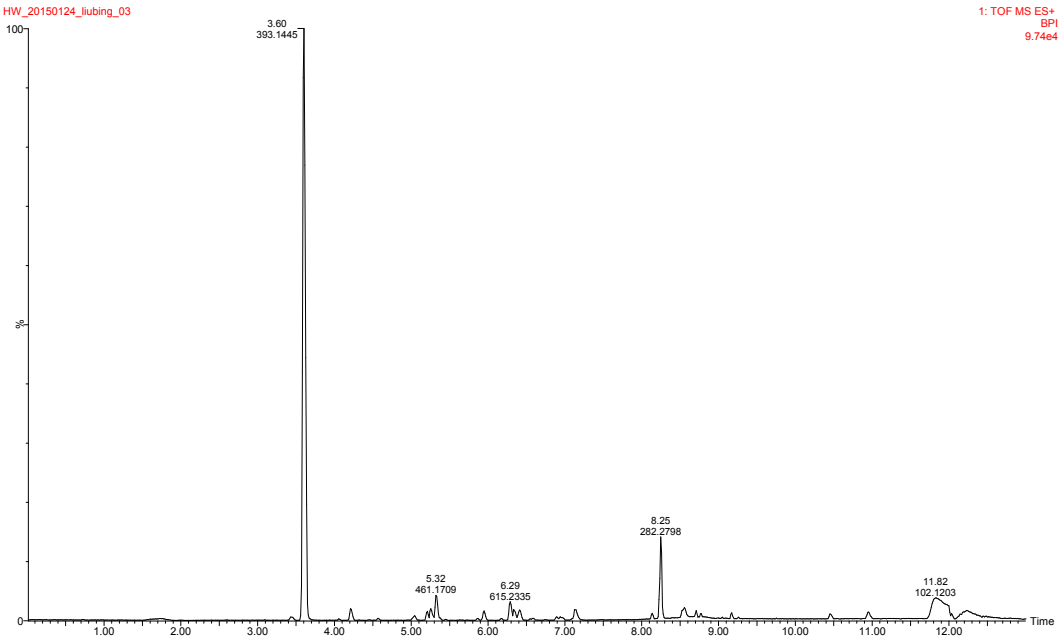

Figure S5. The HPLC traces of HPG-2S-SN38 micelles treated with 1 mM H_2O_2 for 12 h. The peak at 3.60 min was SN38 derived from the thiolysis of HPG-2S-SN38.

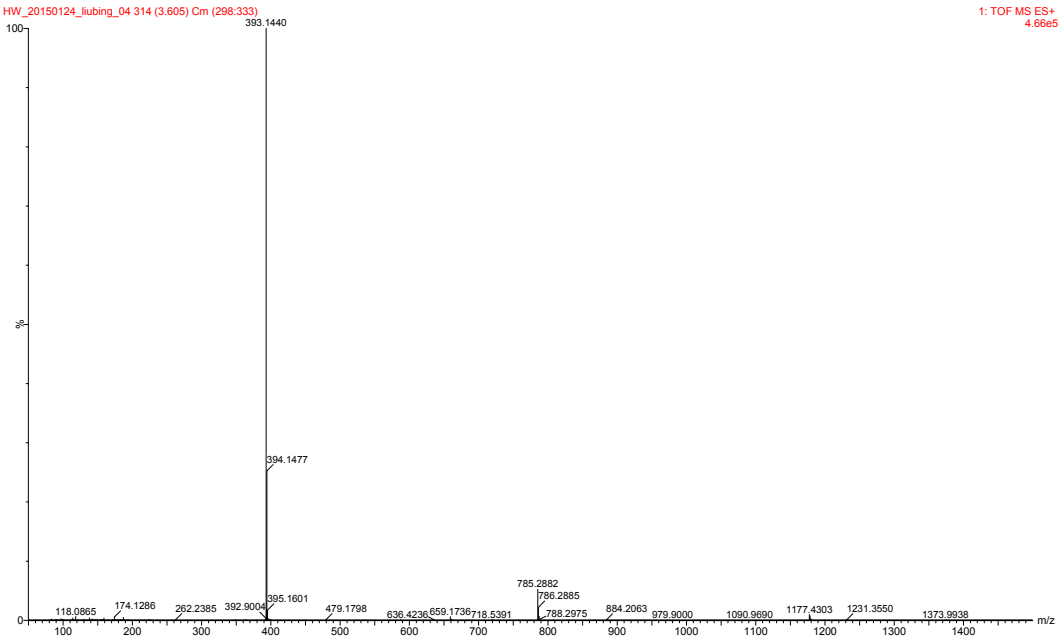

Figure S6. Mass spectrum (ES+) of SN38 released from HPG-2S-SN38 micelles treated with 5 mM H_2O_2 for 12 h. ($M+H^+$, m/z = 393.1440)

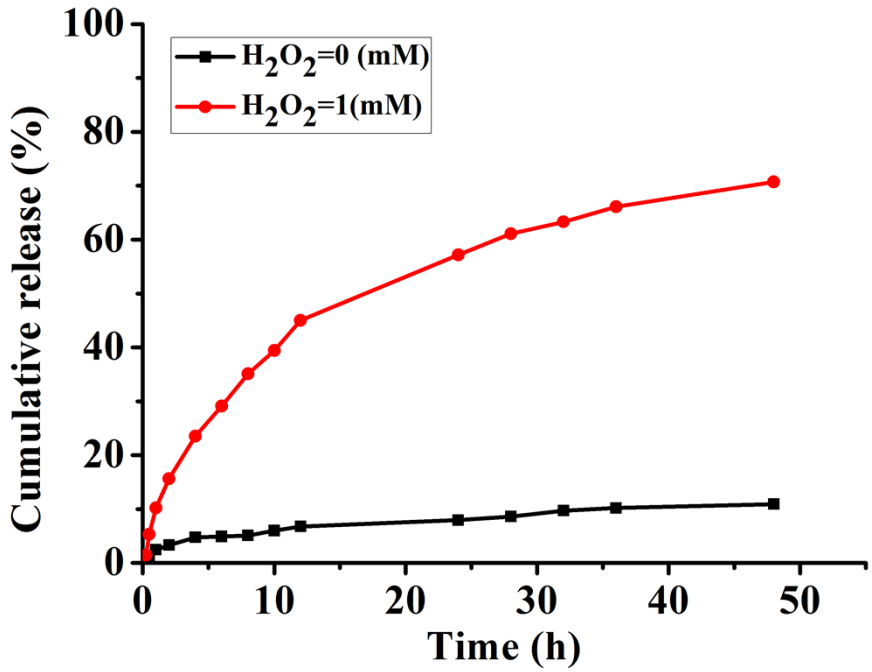

Figure S7. *In vitro* release of nile red from HPG-2S-SN38 micelles in PBS (pH 7.4, 50 mM) at 37 °C with or without treatment of 1 mM H_2O_2. Data are presented as the average ± standard deviation (n = 3).

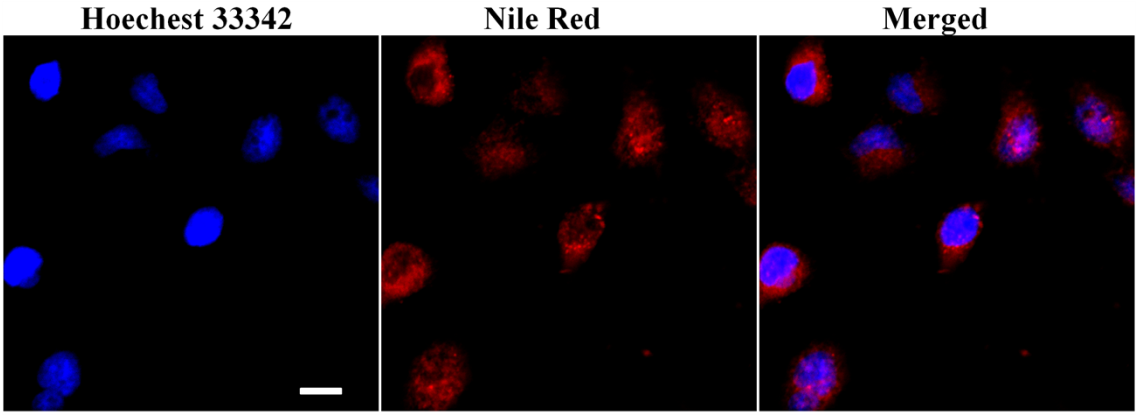

Figure S8. Representative confocal laser scanning microscopy images of MCF-7 cells incubated with nile red-loaded HPG-2S-SN38 micelles for 2 h. Scale bar: 20 μm.

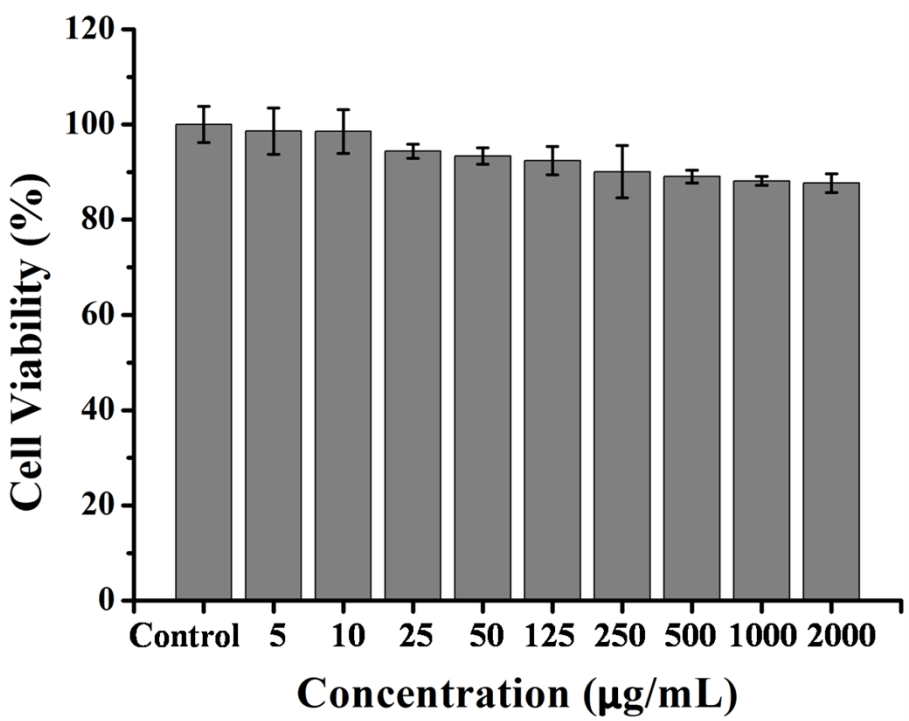

Figure S9. Cell viability of MCF-7 cells against HPG after cultured for 48 h with different concentrations.

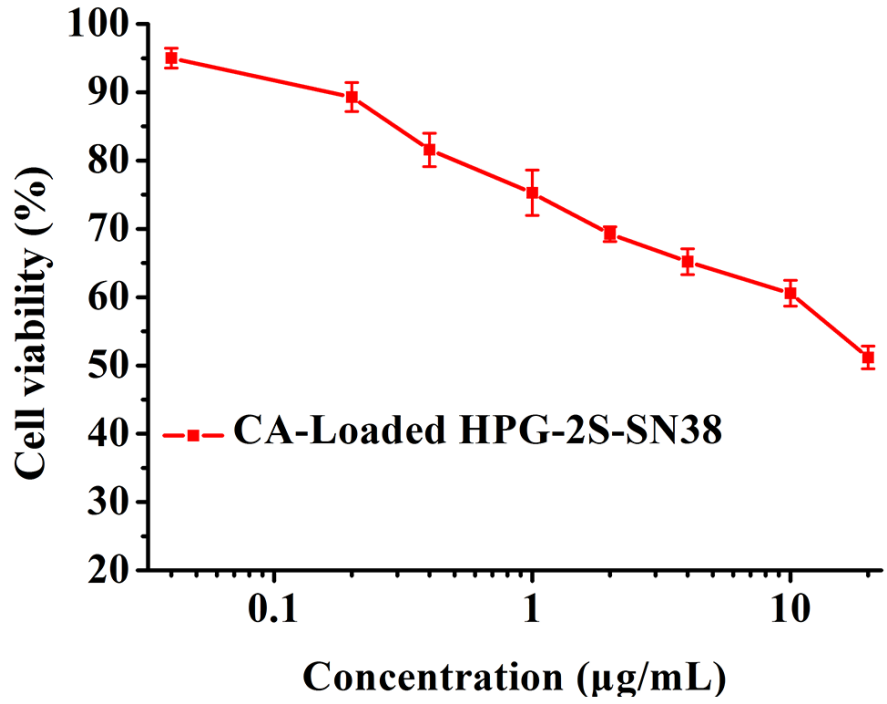

Figure S10. Cell viability of L929 cells (mouse fibroblast cells) against CA-loaded HPG-2S-SN38 after cultured for 48 h with different concentrations.