Supporting Information

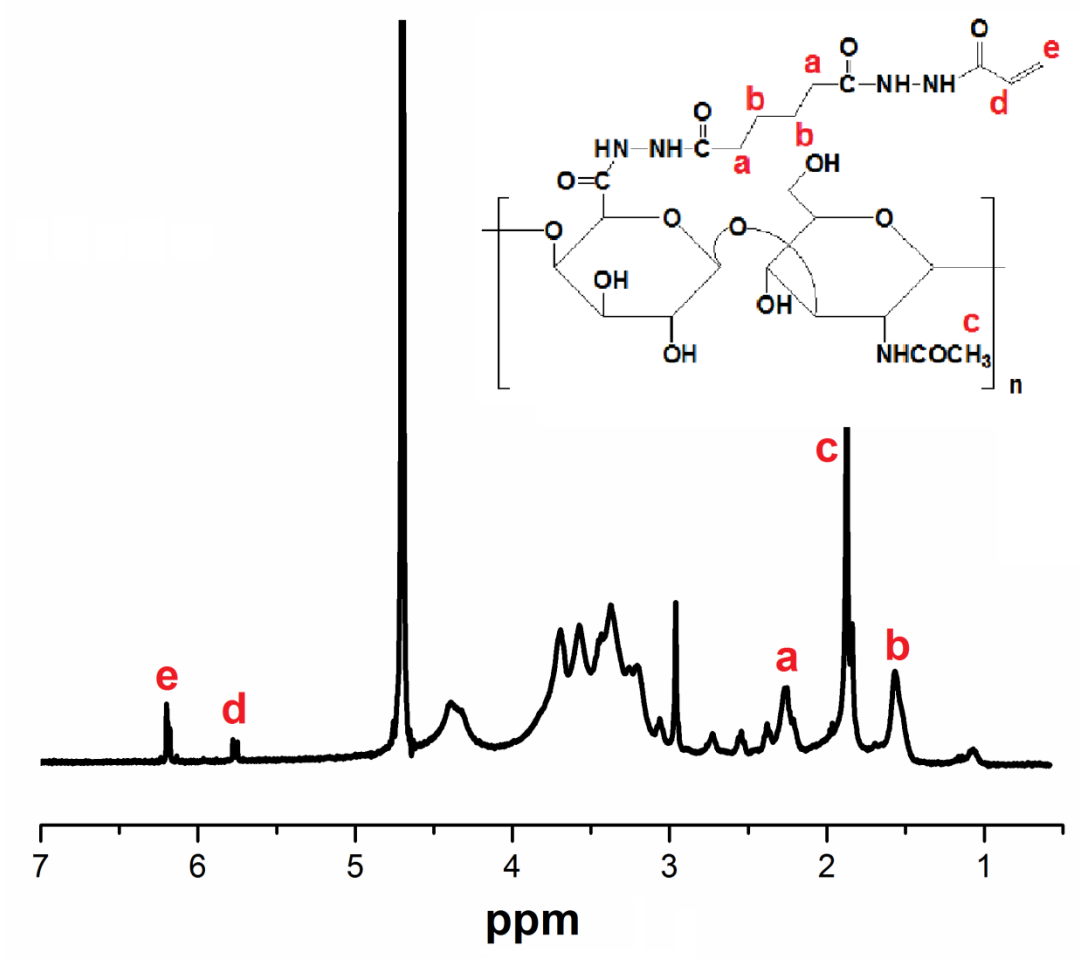

Figure S1. ^{1}H NMR spectrum of acrylated HA (HA-AC) in D_2O.

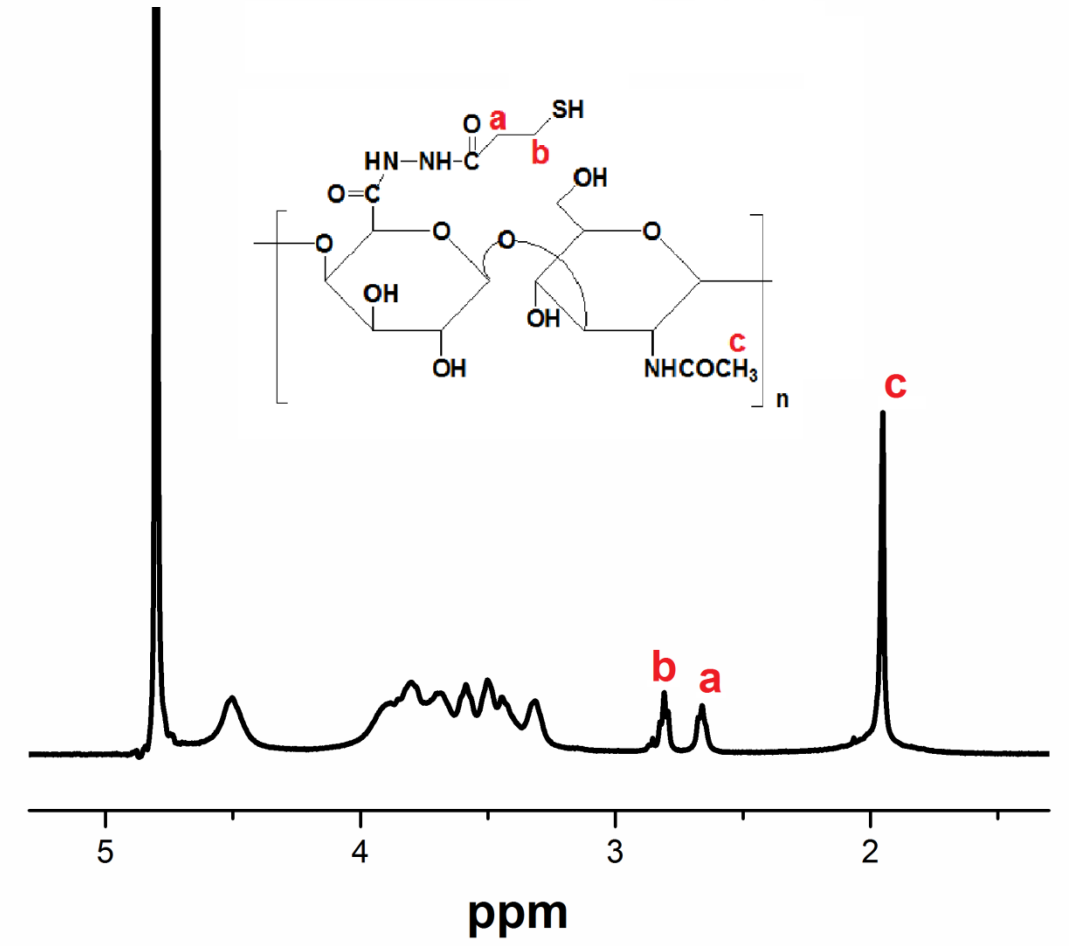

Figure S2. ^{1}H NMR spectrum of thiolated HA (HA-SH) in D_2O.

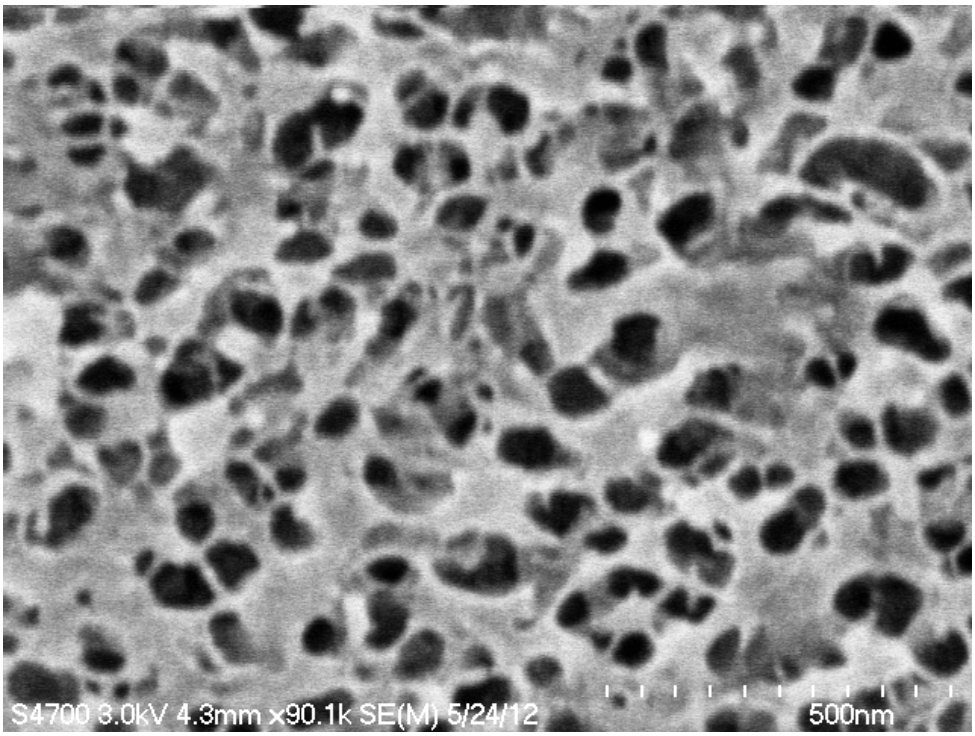

Figure S3. Representative CyroSEM image of HA hydrogels prepared by direct mixing of aqueous solutions of HA-AC and HA-SH. Samples were rapidly frozen using a high pressure freezer (Leica EM PACT) and then freeze-fractured in liquid nitrogen. After water was sublimed, the specimens were coated with gold-palladium and imaged using a Hitachi S-4700 FESEM.

Dose-dependent stimulatory effect of HB-EGF on LNCaP cells. LNCaP cells were seeded in 96-well tissue culture plates at a density of 1×10^4 cells/well in a cell culture medium supplemented with HB-EGF at different concentrations. Cells were incubated at 37 ºC in a humidified atmosphere of 5% CO_2 for 4 days, and cell proliferation was evaluated using the Cell Tilter Blue assay (Promega Corporation, Madison, WI) following the manufacturer's instruction. Proliferation ratio was calculated by normalizing the absorbance value from samples to that of control cells cultured in the absence of HB-EGF.

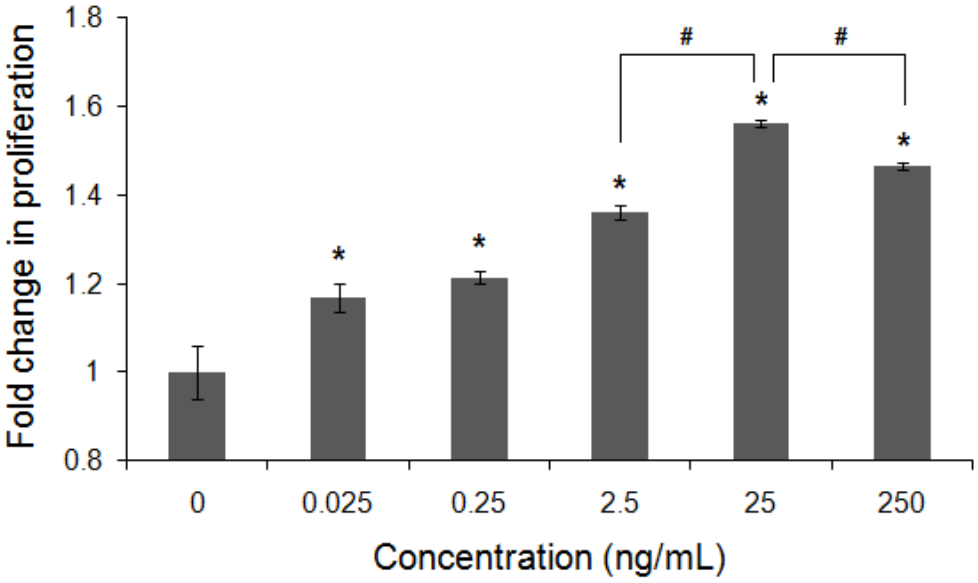

Figure S4. Dose-dependent stimulatory effect of HB-EGF. All experiments were carried out in triplicate and the results are expressed as the mean ± SD. *: Significant difference between HB-EGF-treated samples and the untreated sample (0 ng/mL), $p<0.05$; #: HB-EGF induced a significantly higher rate of cell proliferation at 25 ng/mL than at 2.5 ng/mL or 250 ng/mL, $p<0.05$.

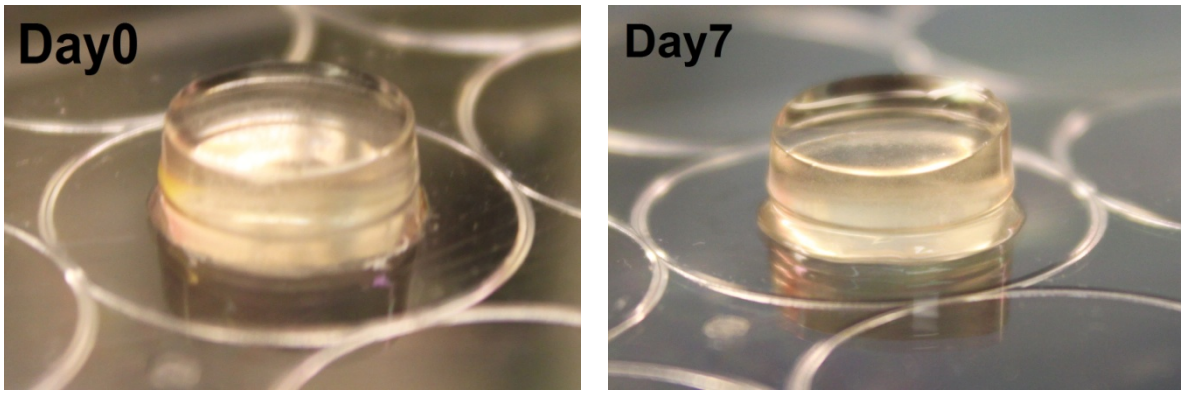

Figure S5. Cell-laden, HA-based hydrogels for 3D LNCaP tumoroids growth cultured at day 0 and day 7. The overall hydrogel shape was maintained at day 7 and limited hydrogel degradation was observed.