Supporting information

Synthesis of highly biocompatible and temperature responsive physical gels for cryopreservation and 3D cell culture

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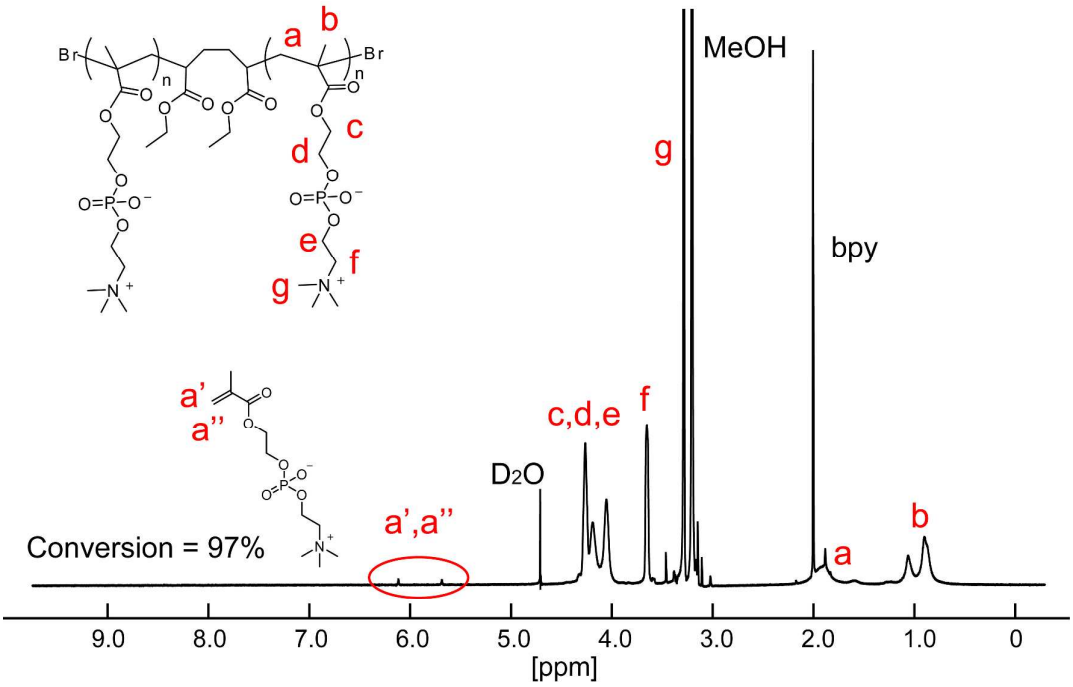

Figure S1. ^{1}H NMR spectrum of Br–MPC$_{243}$–Br after polymerization.

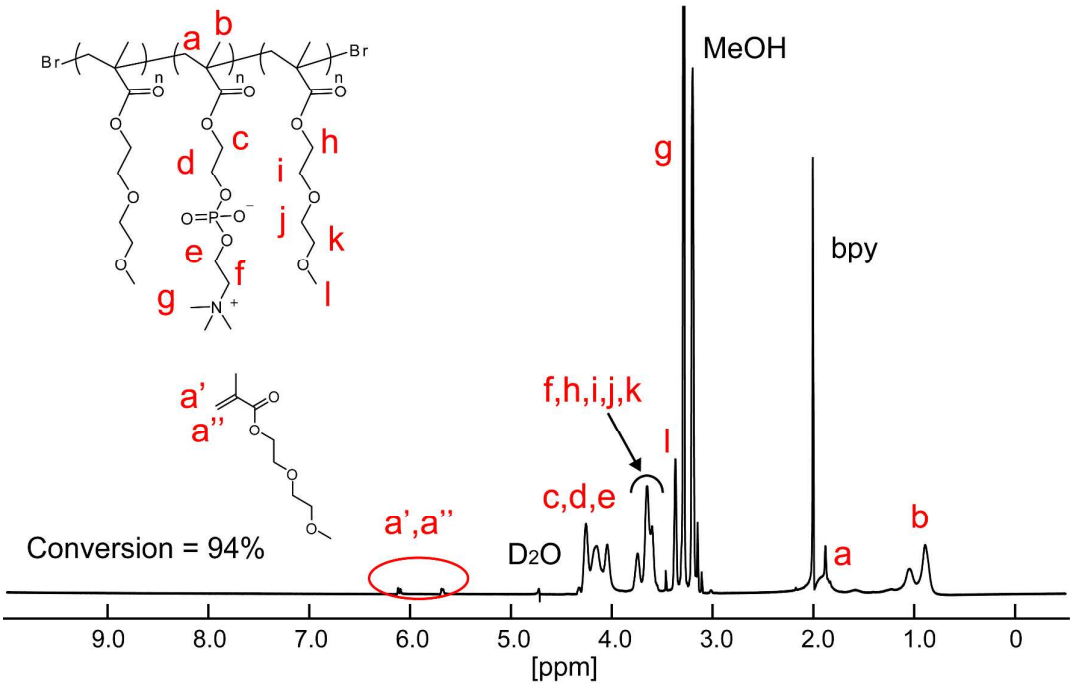

Figure S2. ^{1}H NMR spectrum of DEGMA$_{113}$–*b*–MPC$_{243}$–*b*–DEGMA$_{113}$ after polymerization.

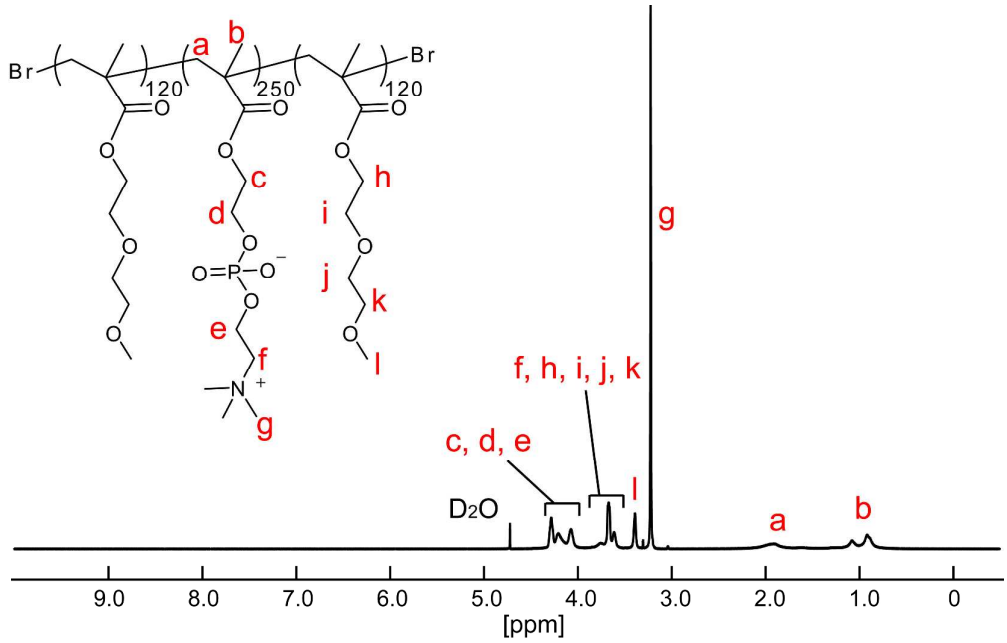

Figure S3. ^{1}H NMR spectrum of DEGMA$_{113}$–MPC$_{243}$–DEGMA$_{113}$ after purification.

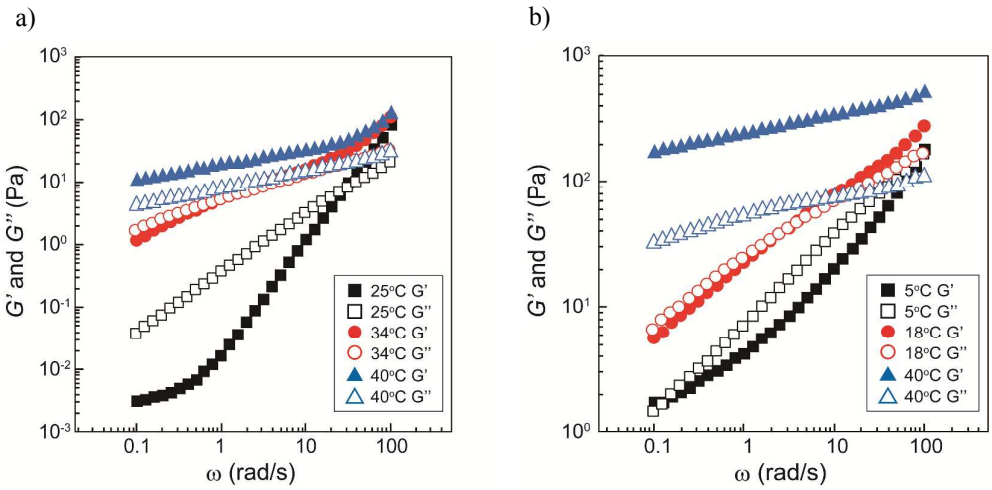

Figure S4. Frequency dependences of the dynamic shear moduli (*G'* and *G''*) for the a) 15 wt% and b) 25 wt% $DEGMA_{113}$–MPC_{243}–$DEGMA_{113}$ solution in PBS measured at strain of 1% and three indicated temperatures.

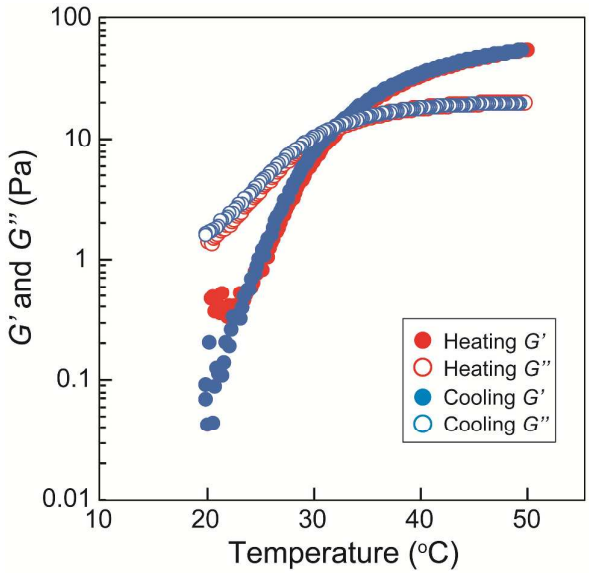

Figure S5. Temperature-dependent dynamic shear moduli (*G'* and *G''*) for the 15 wt% $DEGMA_{113}$–MPC_{243}–$DEGMA_{113}$ solution in PBS buffer measured at a heating rate of 2 ºC/min, at strain of 1% and with angular frequency of 10 rad/s.

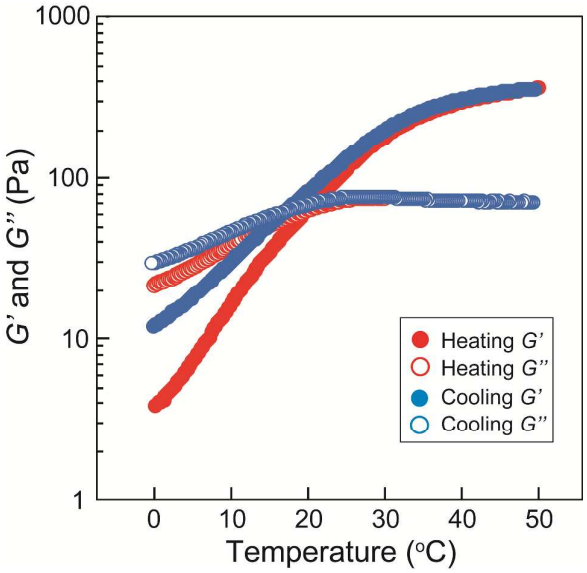

Figure S6. Temperature-dependent dynamic shear moduli (*G'* and *G''*) for the 25 wt% $DEGMA_{113}$–MPC_{243}–$DEGMA_{113}$ solution in PBS buffer measured at a heating rate of 2 ºC/min, at strain of 1% and with angular frequency of 10 rad/s.

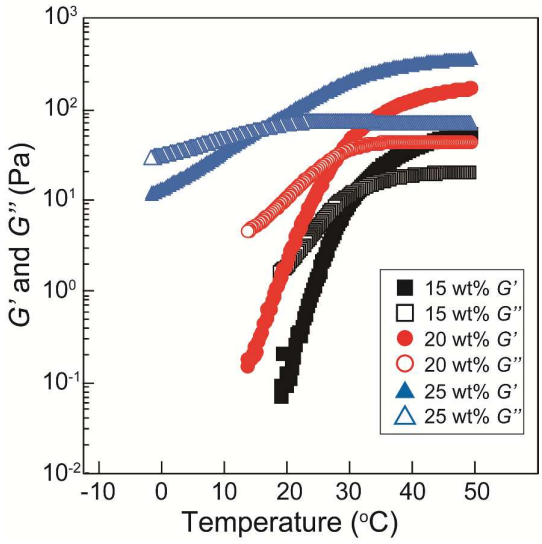

Figure S7. Temperature-dependent dynamic shear moduli (*G'* and *G''*) for the three $DEGMA_{113}$–MPC_{243}–$DEGMA_{113}$ gels with different polymer concentrations measured at a heating rate of 2 ºC/min, at strain of 1% and with angular frequency of 10 rad/s (cooling).

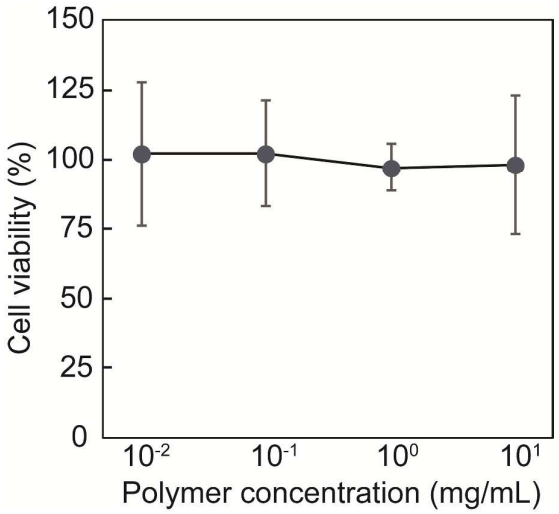

Figure S8. Viability of HeLa cells treated with $PDEGMA_{113}$–*b*–$PMPC_{243}$–*b*–$PDEGMA_{113}$ for 24 h.