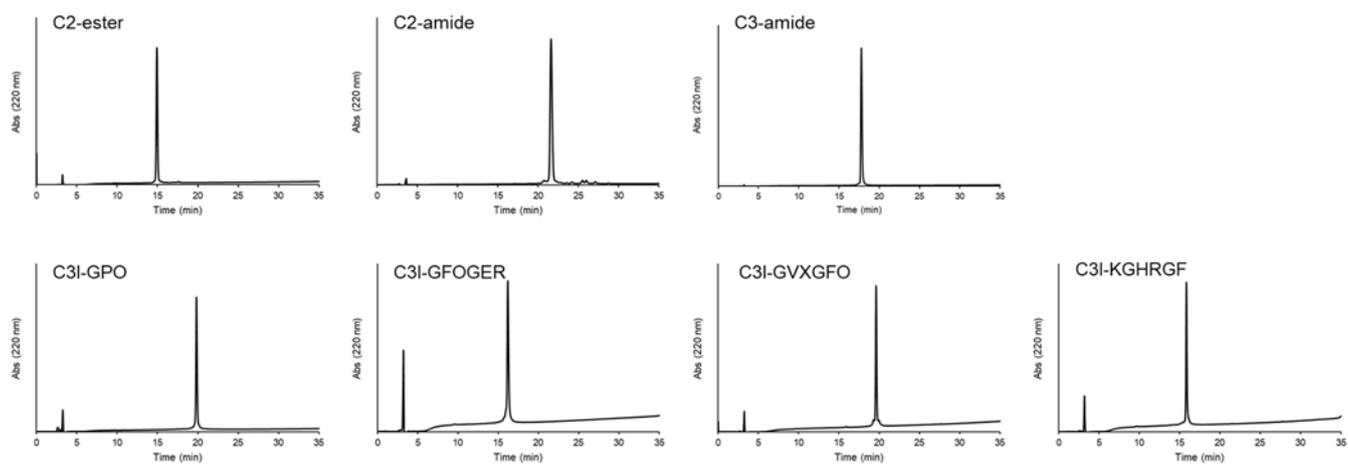
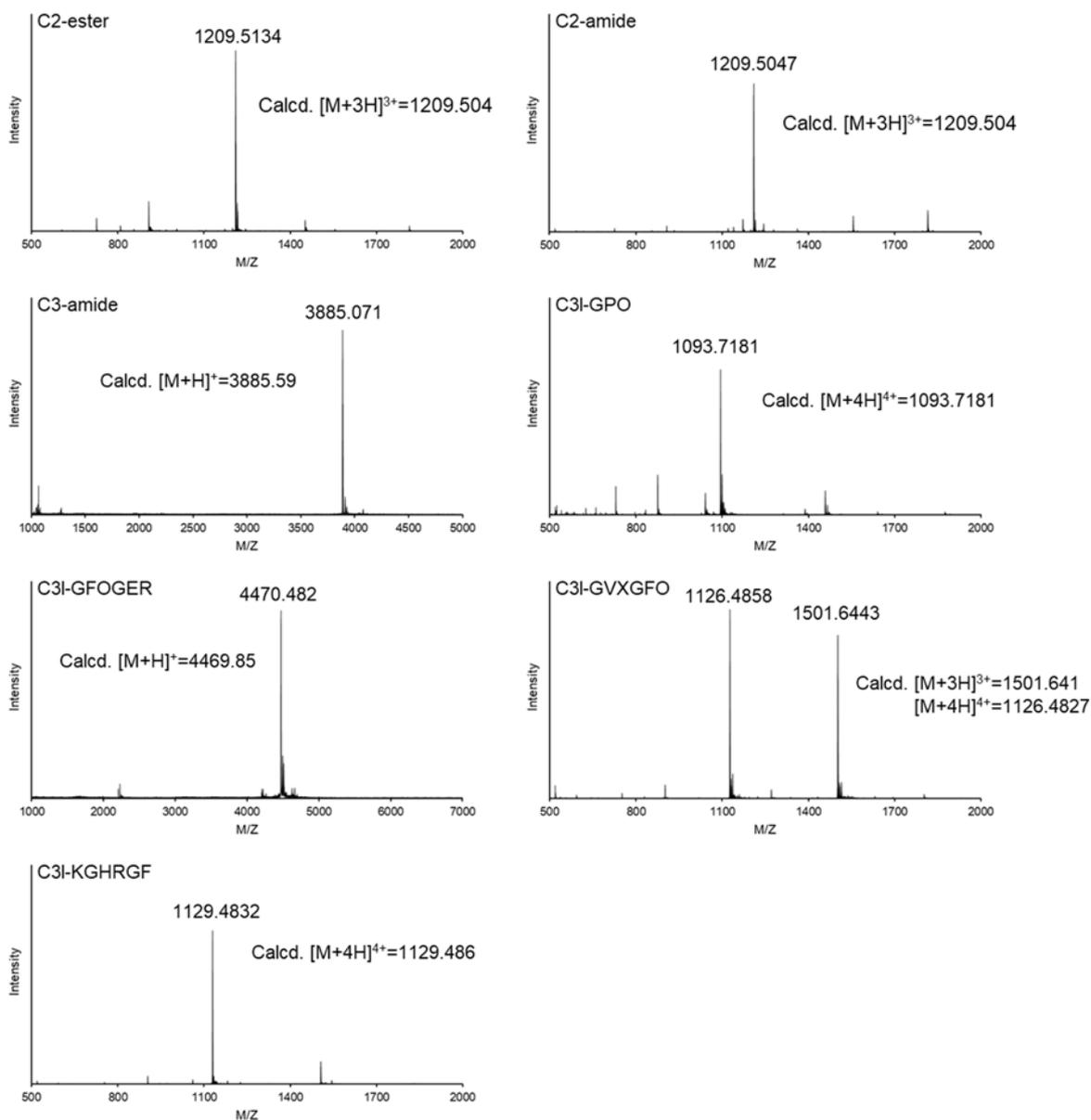


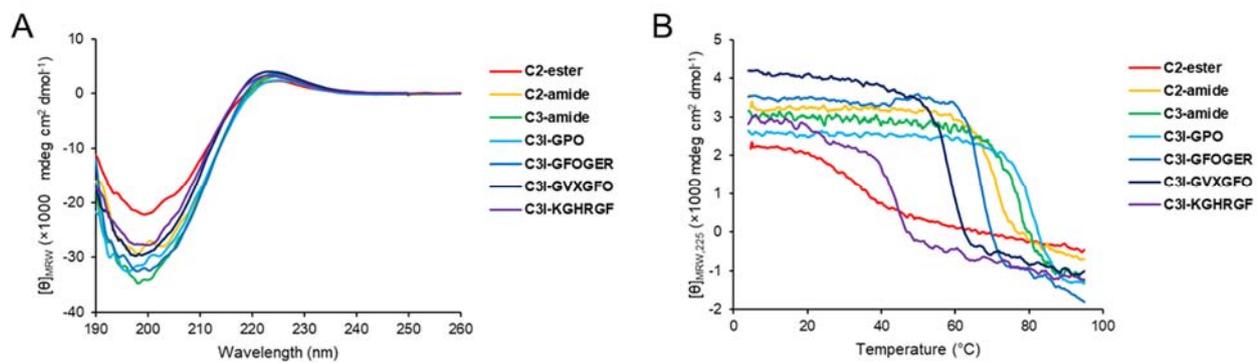
## Supplemental materials



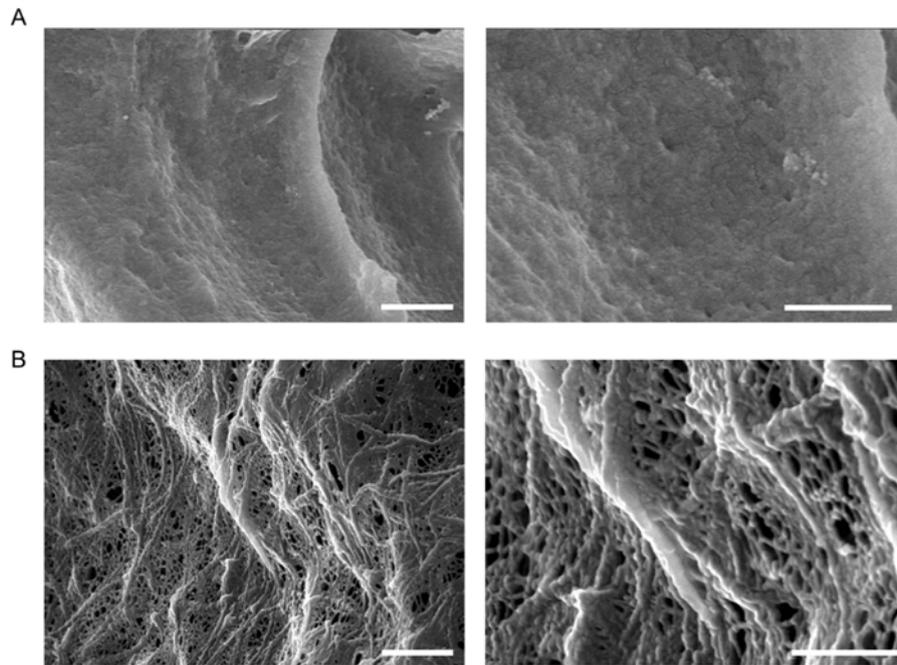
**Figure S1.** RP-HPLC analysis of the peptides. The peptides were analyzed on a Cosmosil 5C<sub>18</sub> AR-II column with the linear gradient of acetonitrile/water (10%–20% for **C2-amide**, 10%–30% for **C2-ester**, **C3-amide**, and **C3I-GPO**, and 10%–40% for **C3I-GFOGER**, **C3I-GVXGFO** and **C3I-KGHRGF** in 30 min) at 60 °C at a flow rate of 1 mL min<sup>-1</sup>.



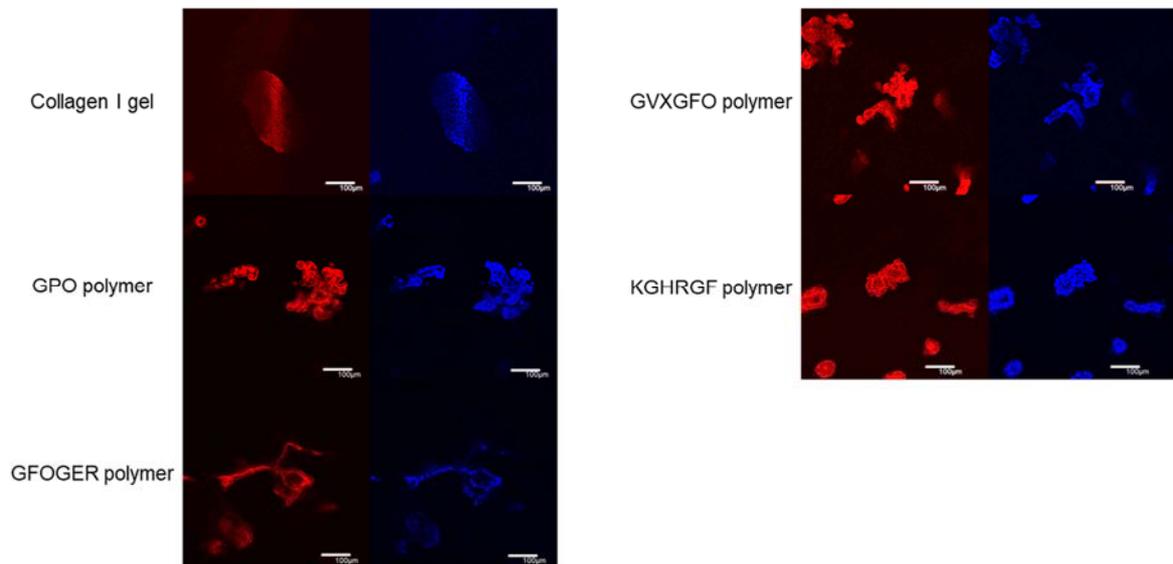
**Figure S2.** Mass analysis of the peptides. **C3m-amide** and **C3I-GFOGER** were analyzed by matrix-assisted laser desorption–ionization time-of-flight mass spectrometry (MS) using  $\alpha$ -cyano-4-hydroxycinnamic acid as a matrix, and the other samples were analyzed by electrospray ionization MS.



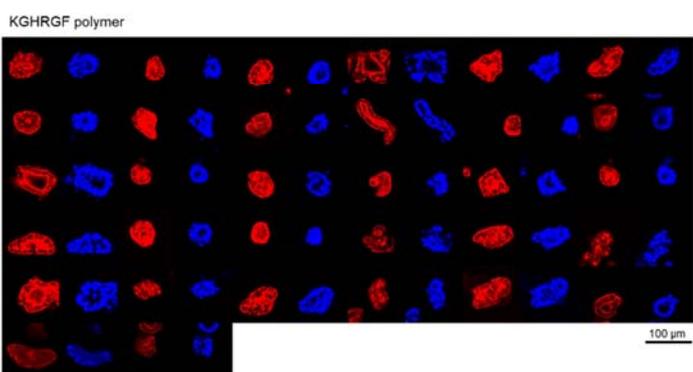
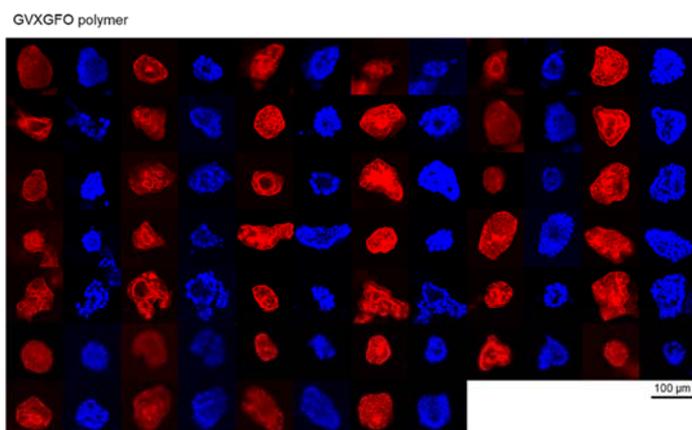
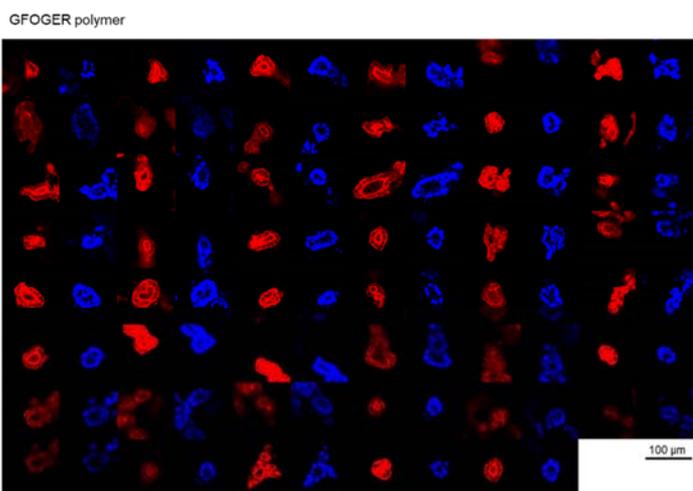
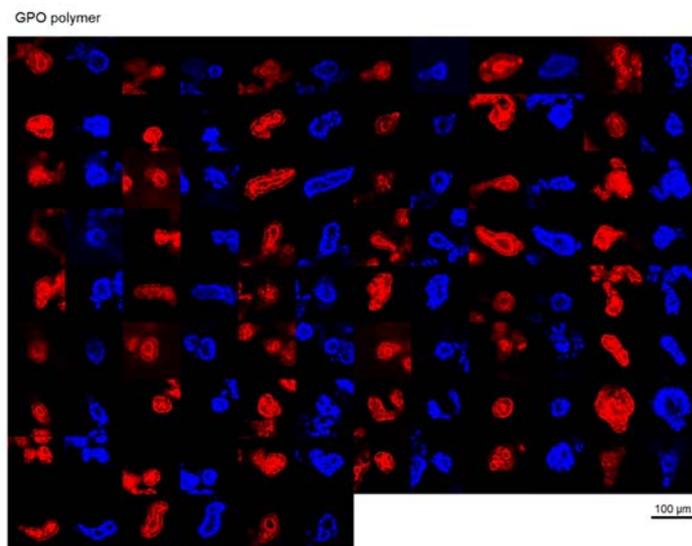
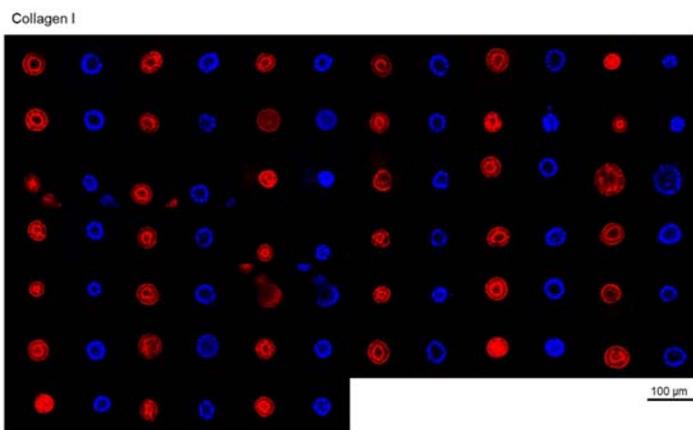
**Figure S3.** CD analysis of the peptides. (A) CD spectra of the peptides at 4 °C. The peptides were annealed in 0.05% TFA(aq), and the spectra were measured in the presence of 10 mM TCEP. (B) Monitoring of the CD signal at 225 nm with increasing temperature from 4 to 95 °C. Data of **C2-ester** and **C2-amide** are the same in Figure 2.



**Figure S4.** SEM images of the peptide polymer gel and type I collagen gel. Platinum-coated surface of **C2-ester** and **C3-amide** copolymer after sol–gel transition (A) and type I collagen gel (B) was observed at two different magnifications [ $\times 20,000$  (left) and  $\times 60,000$  (right)]. Scale bars in left and right panels indicate 1  $\mu\text{m}$  and 500 nm, respectively. **C2-ester:C3-amide** (1:1) copolymer (total concentration = 7 mg/mL) was mixed with 10 $\times$  D-MEM, and incubated at room temperature for 30 min for gel formation. Type I collagen gel (2.5 mg/mL) was prepared by mixing 3 mg/mL acid soluble type I collagen and 10 $\times$  PBS followed by incubation at 37 $^{\circ}\text{C}$  for 30 min.



**Figure S5.** Fluorescence images of MDCK cell aggregations. MDCK cell aggregations with size of larger than 100 μm were observed by confocal fluorescence microscopy. The nuclei and F-actin were stained in blue and red, respectively. The scale bars indicate 100 μm.



**Figure S6.** Fluorescence images of the MDCK-cell spheres. MDCK-cell spheres with diameter of less than 100  $\mu\text{m}$  were observed by confocal fluorescence microscopy.