

Table S1. Characterization of PCGA-*b*-PEG-*b*-PCGA triblock copolymers (tri-PCGs)

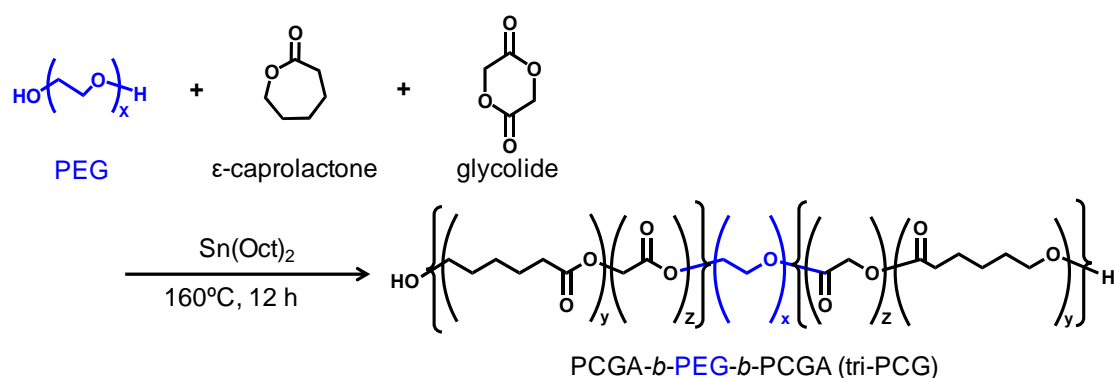
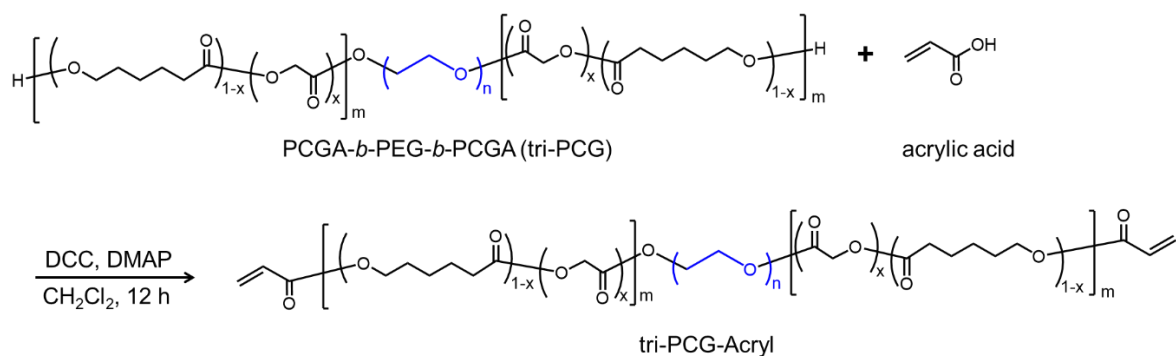
Code	DP of CL ^{a)}	DP of GA ^{b)}	CL/GA ^{c)}	M_n (Da) ^{d)}	M_w (Da) ^{e)}	M_w/M_n ^{e)}
tri-PCG-1	14.6	4.3	3.4	5,400	6,900	1.38
tri-PCG-2	9.9	2.6	3.9	4,000	4,800	1.38

- a) The degree of polymerization of the ϵ -caprolactone unit in a PCGA segment was calculated using ¹H-NMR.
 b) The degree of polymerization of a glycolic acid unit in a PCGA segment was calculated using ¹H-NMR.
 c) Molar ratio of CL/GA in a PCGA segment estimated using ¹H-NMR
 d) Number-average of the molecular weight estimated using ¹H-NMR.
 e) Weight-average of the molecular weight and the polydispersity index estimated using SEC.

Table S2. Characterization of tri-PCG-Acryl

Code	M_n (Da) ^{a)}	M_w (Da) ^{b)}	M_w/M_n ^{b)}	DS (%) ^{c)}
tri-PCG-Acryl	4,200	5,100	1.40	91

- a) Number-average of the molecular weight estimated using ¹H-NMR.
 b) Weight-average of the molecular weight and the polydispersity index estimated using SEC.
 c) Degree of substitution of the acryloyl group calculated using ¹H-NMR.

**Scheme S1.** Synthesis of PCGA-*b*-PEG-*b*-PCGA triblock copolymer (tri-PCG).

DCC: N,N'-dicyclohexylcarbodiimide
 DMAP: 4-dimethylaminopyridine

Scheme S2 Synthesis of tri-PCG-Acryl

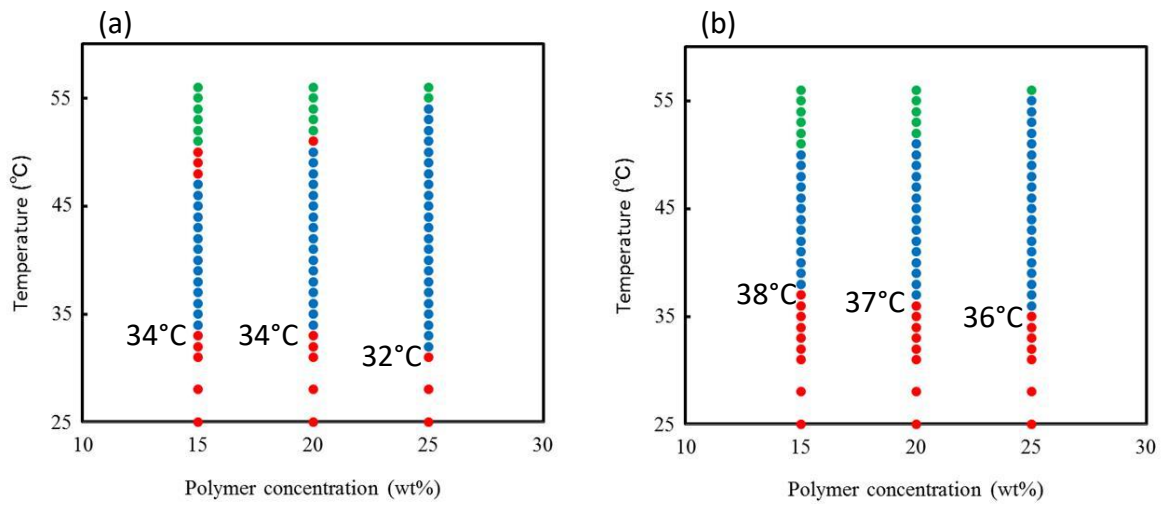


Figure S1. Phase diagrams of (a) tri-PCG and (b) tri-PCG-Acryl. ●: sol, ●: gel, ●: sol (syneresis). The gelation temperature (T_{gel}) of each concentration is indicated.

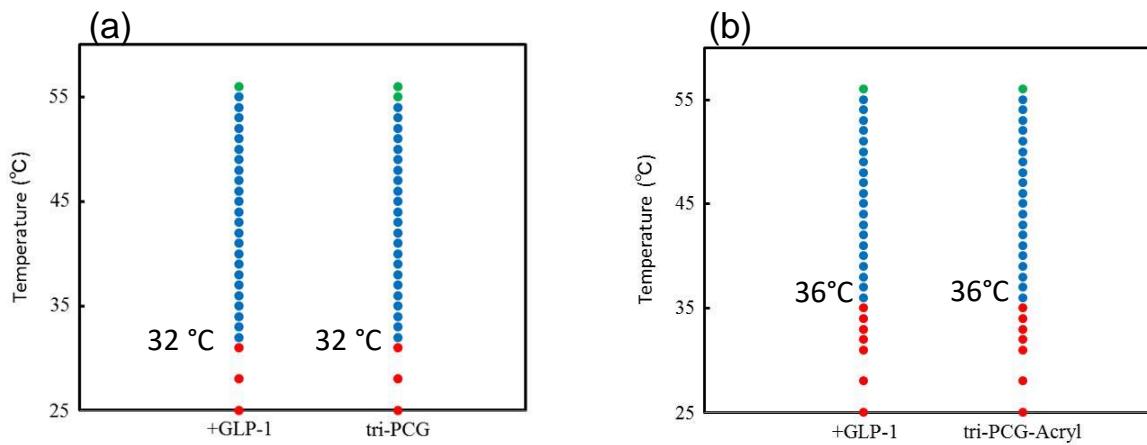


Figure S2. Comparison of the gelation temperature in the presence or absence of GLP-1 for (a) tri-PCG and (b) tri-PCG-Acryl. ●: sol, ●: gel, ●: sol (syneresis). The polymer concentration = 25 wt%. The gelation temperature (T_{gel}) of each sample is indicated.

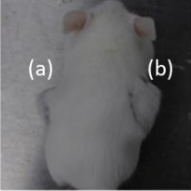
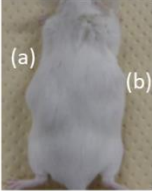
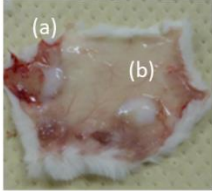
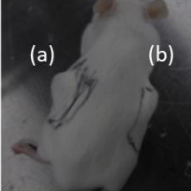
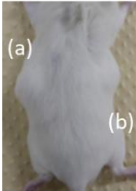

	Just after injection	after 1 day	
<i>F(P1)</i>	Outside appearance 	Outside appearance 	Under the skin 
<i>F(P1/D+PA₄₀)</i>			

Figure S3. Photographs of the rats injected with ***F(P1)*** without GLP-1 (top) and ***F(P1/D+PA₄₀)*** without GLP-1 just after injection, and after 1 day.