

Supporting information

Temperature-Induced Intracellular Uptake of Thermoresponsive Polymeric Micelles

Jun Akimoto^{a, b}, Masamichi Nakayama^a, Kiyotaka Sakai^b, and Teruo Okano^a

^aInstitute of Advanced Biomedical Engineering and Science, Tokyo Women's Medical
University, TWIns, Kawada-cho 8-1, Shinjuku, Tokyo 162-8666, Japan

^bDepartment of Applied Chemistry, Waseda University,
Ohkubo 3-4-1, Shinjuku, Tokyo 169-8555, Japan

1. Characterization of polymers

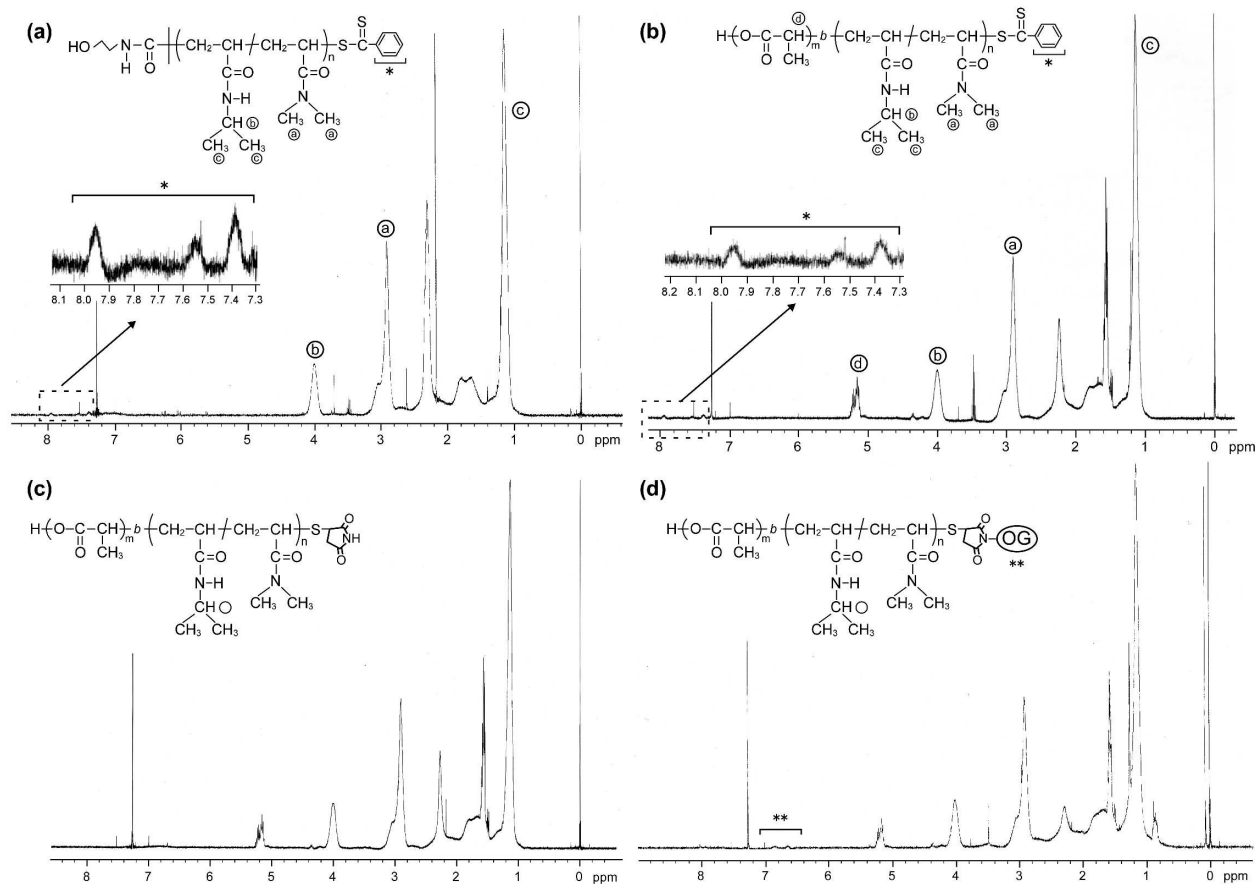


Figure S1. ^1H -NMR spectra (in CDCl_3) of (a) TBT-P(IPAAm-co-DMAAm)-OH, (b) TBT-P(IPAAm-co-DMAAm)-b-PLA, (c) Mal-terminated P(IPAAm-co-DMAAm)-b-PLA, and (d) OG-terminated P(IPAAm-co-DMAAm)-b-PLA.

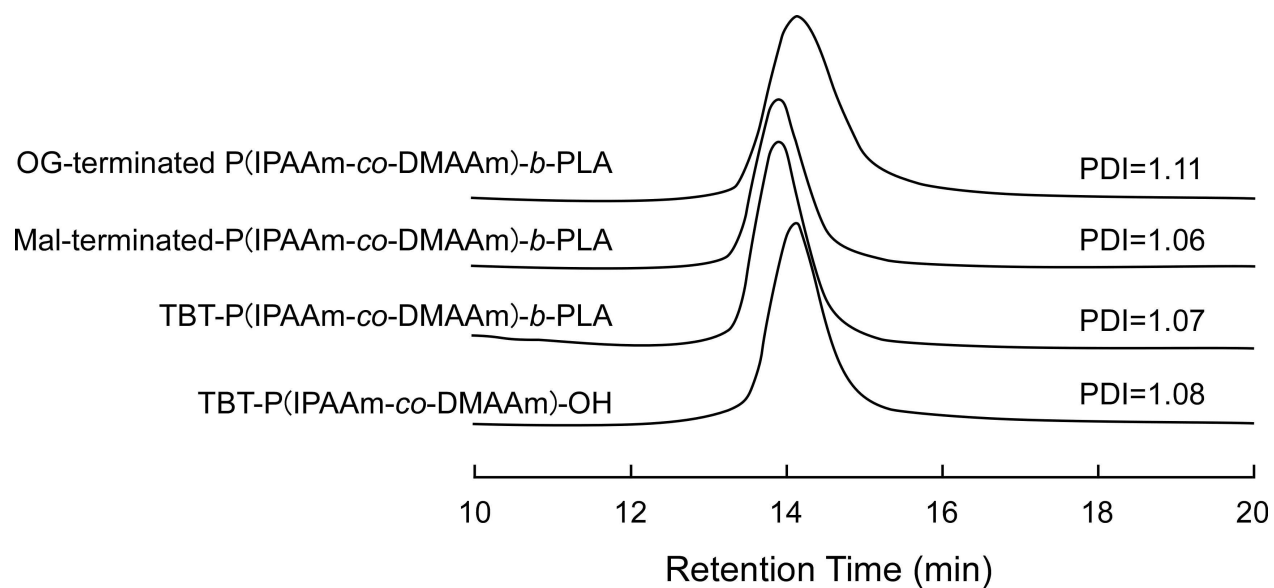


Figure S2. GPC curves of thermoresponsive polymers.

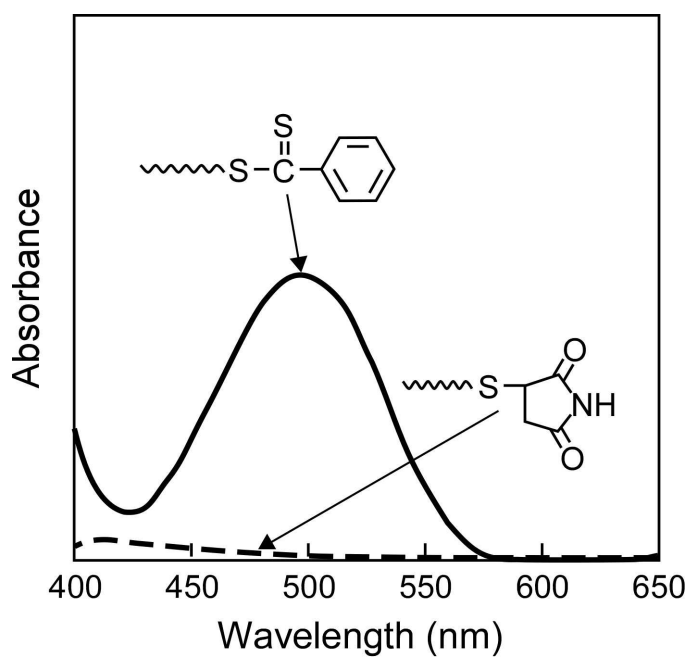


Figure S3. UV spectra of TBT-P(IPAAm-co-DMAAm)-*b*-PLA block copolymers before and after terminal maleimide modification.

Characterization of thermoresponsive polymeric micelles

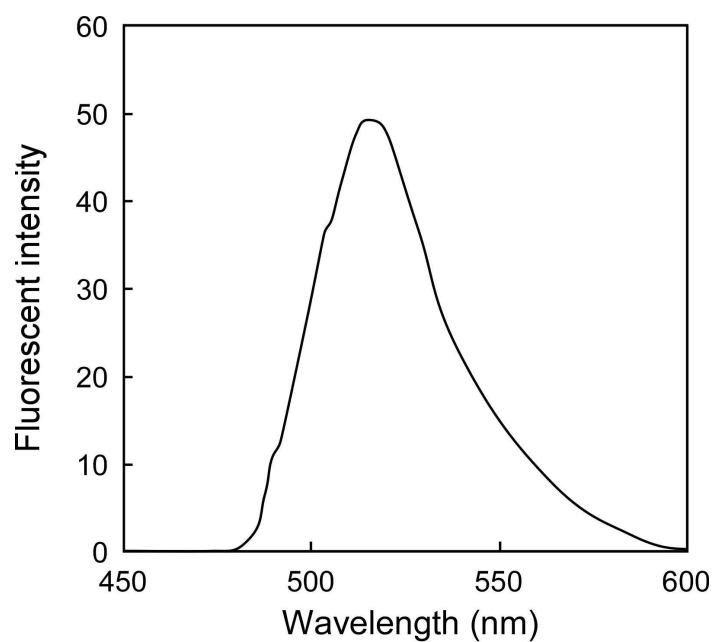


Figure S4 Fluorescence spectrum of OG-labeled thermoresponsive polymeric micelles in water.

$\lambda_{\text{ex}}=495\text{nm}$.

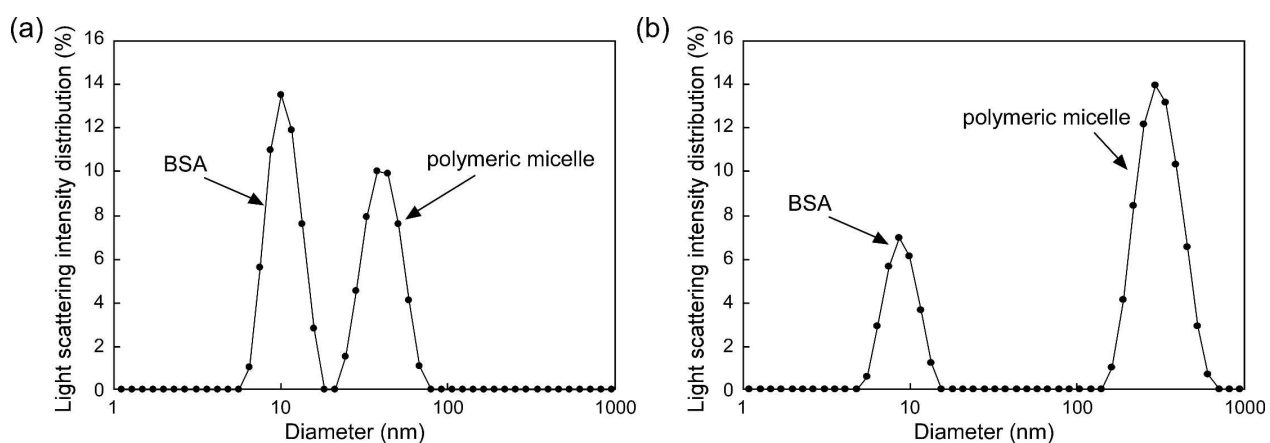


Figure S5 Size distribution of OG-labeled thermoresponsive polymeric micelles in the presence of bovine serum albumin (BSA) at temperatures (a) below (37°C) and (b) above (42°C) the LCST in DPBS(-). [polymer]=0.2mg/mL, [BSA]=1mg/mL.

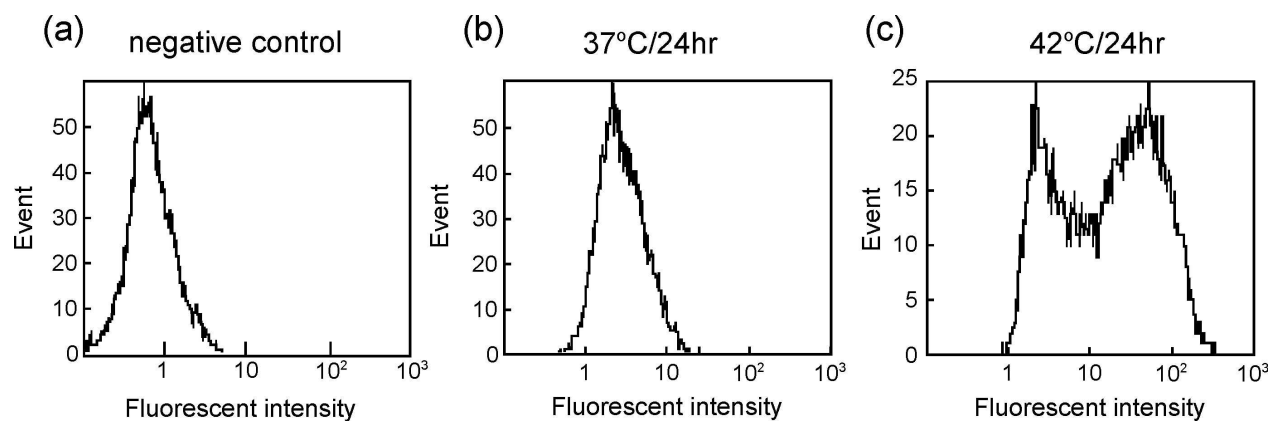


Figure S6 Flow cytometric fluorescence histograms of bovine carotid endothelial cells incubated with or without OG-labeled thermoresponsive polymeric micelles for 24 h. (a) Basal fluorescence of the cells, (b) below (37°C) and (c) above (42°C) the micelle LCST.