

Supporting Information

Synthesis of Water-Soluble Polyisocyanate with Oligo(ethylene glycol) Side-Chain as a New
Thermoresponsive Polymer

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SCE, NMR, and Thermoresponsive Measurements

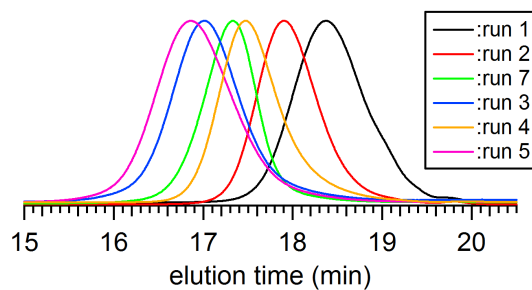


Figure S1. (a) SEC traces of obtained PMeEO_3ICs (runs 1 – 5, and 7) in THF.

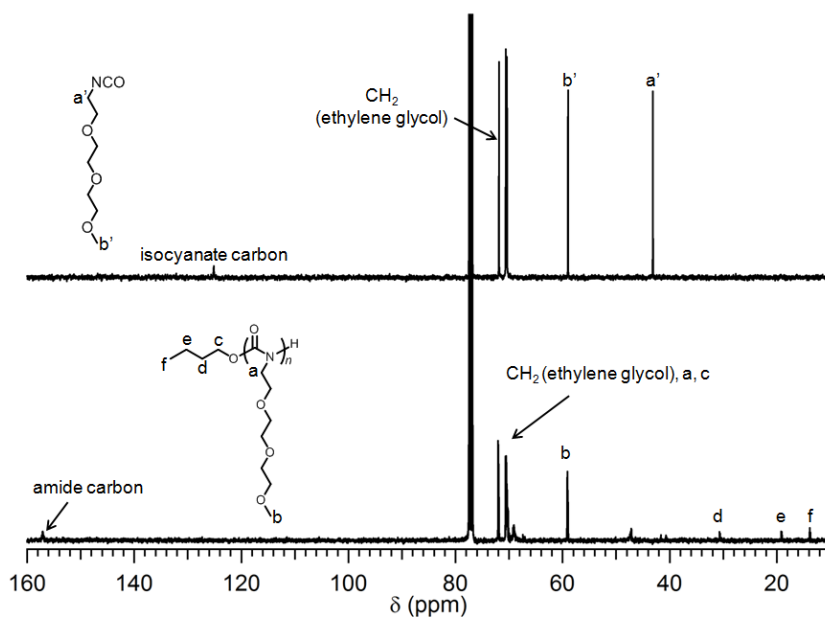


Figure S2. ^{13}C NMR spectra of MeEO_3IC (upper) and PMeEO_3IC (run 2, lower) in CDCl_3 .

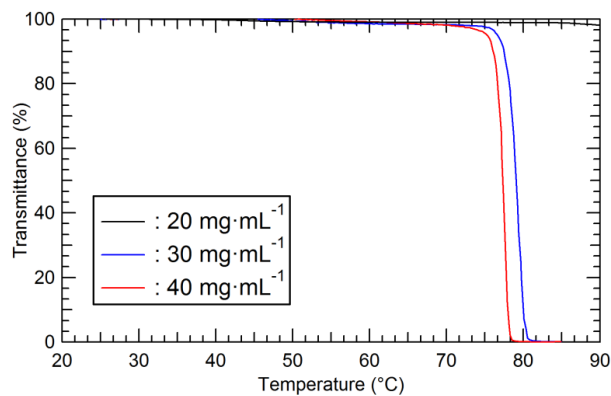


Figure S3. Transmittance versus temperature for the aqueous solutions of **PMeEO₃IC** (run 3, $M_{n,NMR} = 5,560$) with polymer concentrations of 20, 30, and 40 g L⁻¹. The data were recorded at 400 nm at the heating rate of 1 °C/min.

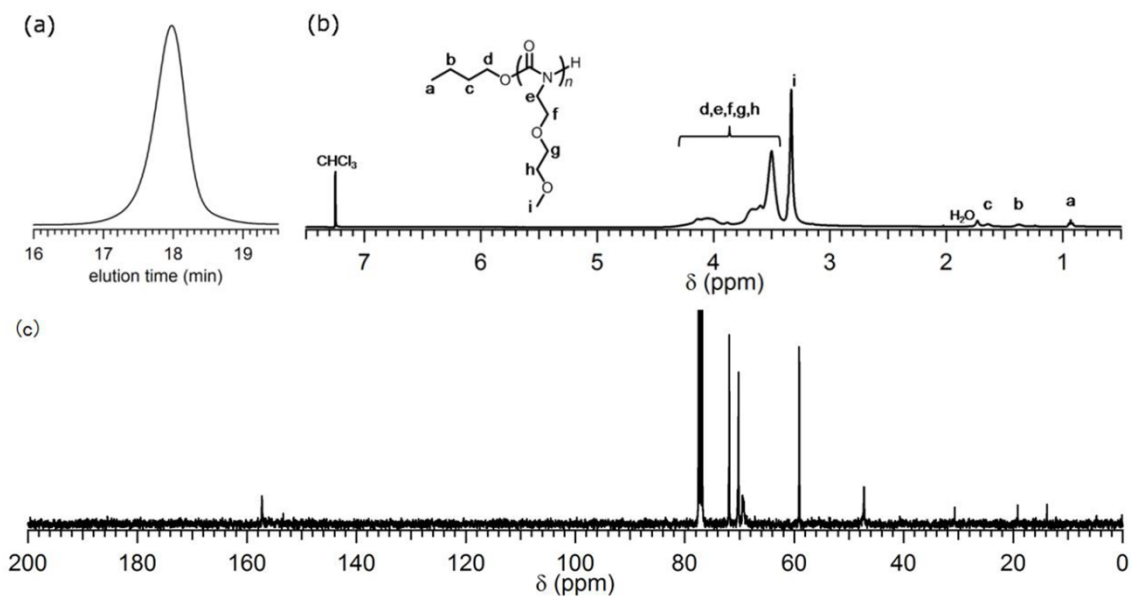


Figure S4. (a) SEC trace of **PMeEO₂IC** (run 6) in THF, (b) ¹H NMR spectrum of **PMeEO₂IC** (run 6) in CDCl₃, and (c) ¹³C NMR spectrum of **PMeEO₂IC** (run 6) in CDCl₃.

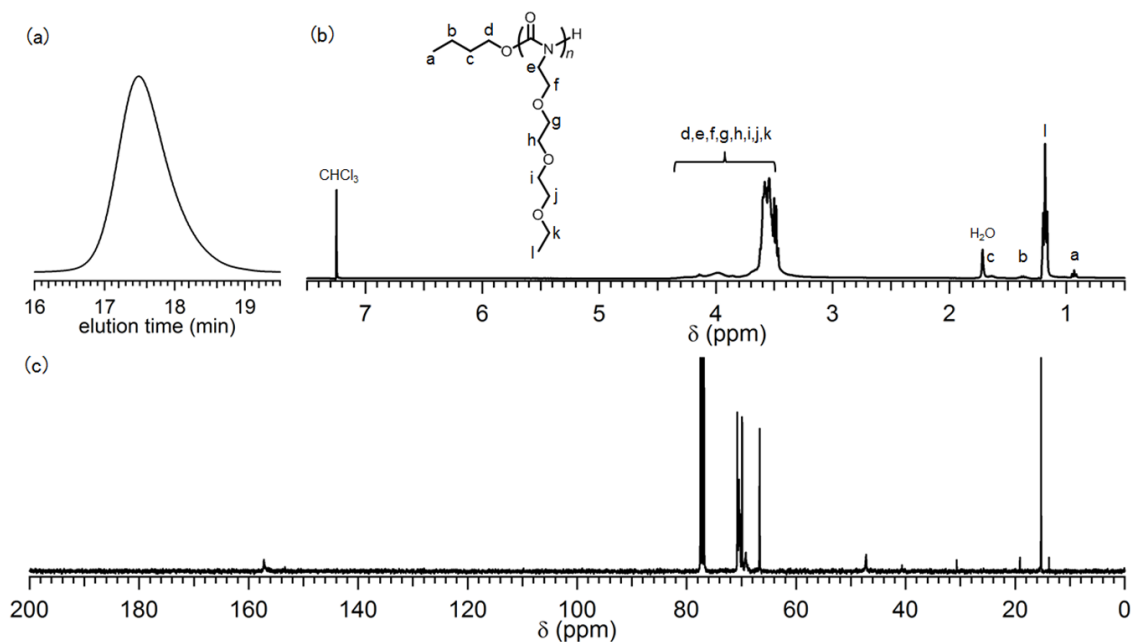


Figure S5. (a) SEC trace of **PEtEO₃IC** (run 8) in THF and (b) ¹H NMR spectrum of **PEtEO₃IC** (run 8) in CDCl₃, and (c) ¹³C NMR spectrum of **PMeEO₂IC** (run 8) in CDCl₃.

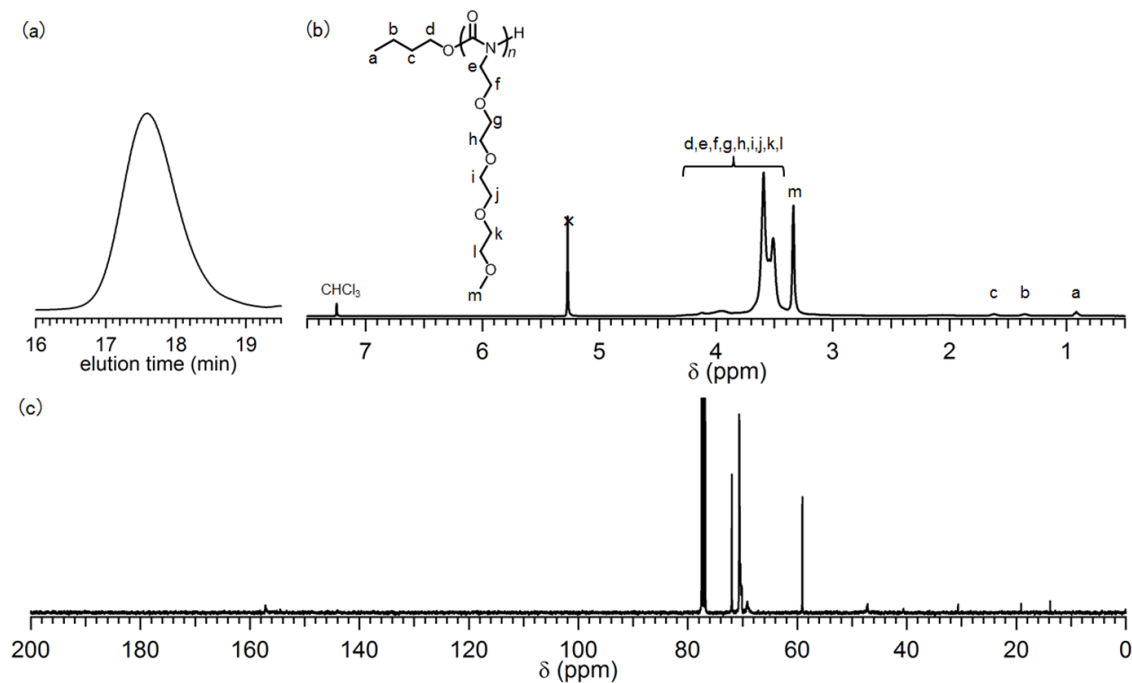


Figure S6. (a) SEC trace of **PMeEO₄IC** (run 9) in THF and (b) ¹H NMR spectrum of **PMeEO₄IC** (run 9) in CDCl₃, and (c) ¹³C NMR spectrum of **PMeEO₂IC** (run 9) in CDCl₃.