Supporting Information for

Triple-Stimuli-Responsive Ferrocene-Containing Homopolymer by RAFT Polymerization

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Scheme S1. Synthetic route of 2-acryloxyethyl ferrocenecarboxylate (AEFC).

Figure S1. 1H (A) and 13C (B) NMR spectra of 2-acryloxyethyl ferrocenecarboxylate in CDCl₃.
Figure S2. $^1$H (A) and $^{13}$C (B) NMR spectra of 2-(3-(2-diethylamino)ethylamino)propanoyloxy)ethyl ferrocenecarboxylate in CDCl$_3$.

Figure S3. FT-IR spectrum of Fc-DEAE-AM 3 monomer.
**Figure S4.** ESI-MS spectrum of Fc-DEAE-AM 3 monomer.

**Figure S5.** HR-MS data report of Fc-DEAE-AM 3 monomer.
**Figure S6.** (A) Kinetics plot for solution RAFT homopolymerization of Fc-DEAE-AM 3 monomer. (B) Dependence of molecular weight ($M_n$) and molecular weight distribution (PDI) on the conversion of Fc-DEAE-AM 3 monomer.

**Figure S7.** Dependence of fluorescence intensity ratio of PNA emission band at 418 nm on the concentration of poly(Fc-DEAE-AM) 4a at 25°C when pH of the solution was (A) 7.0 and (B) 10.0.