

Supplementary Information

Temperature-induced fluorescence enhancement of GFP chromophore contained copolymers for detection of *Bacillus thermophiles*

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S-1 Characterization of GFP chromophore, PEG-Cl, PEG-*b*-PNIPAM-Cl, PEG-*b*-PNIPAM-N₃ and PEG-*b*-PNIPAM-c

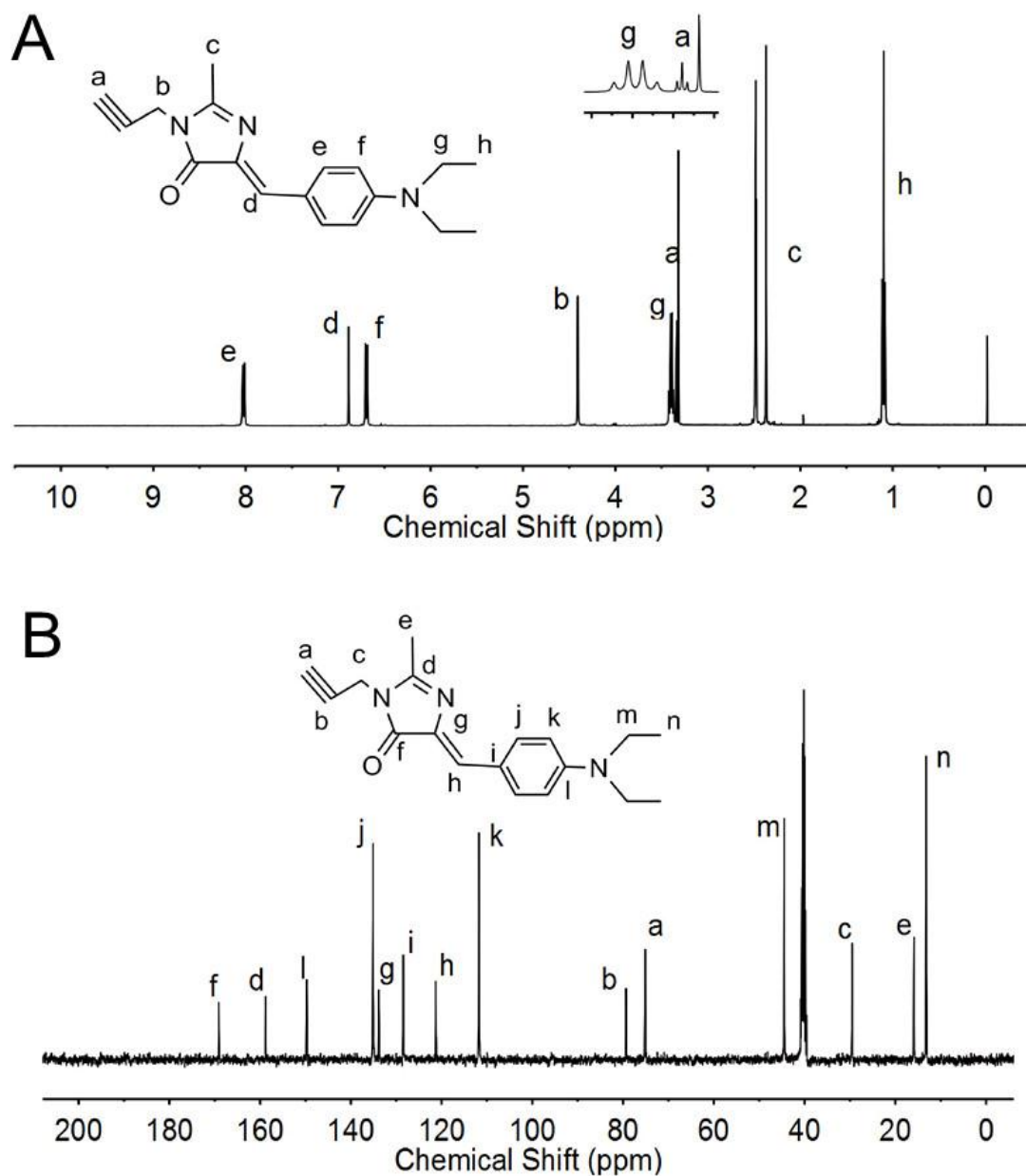


Figure S1. ¹H NMR (A) and ¹³C NMR (B) spectra of the chromophore in DMSO-*d*₆.

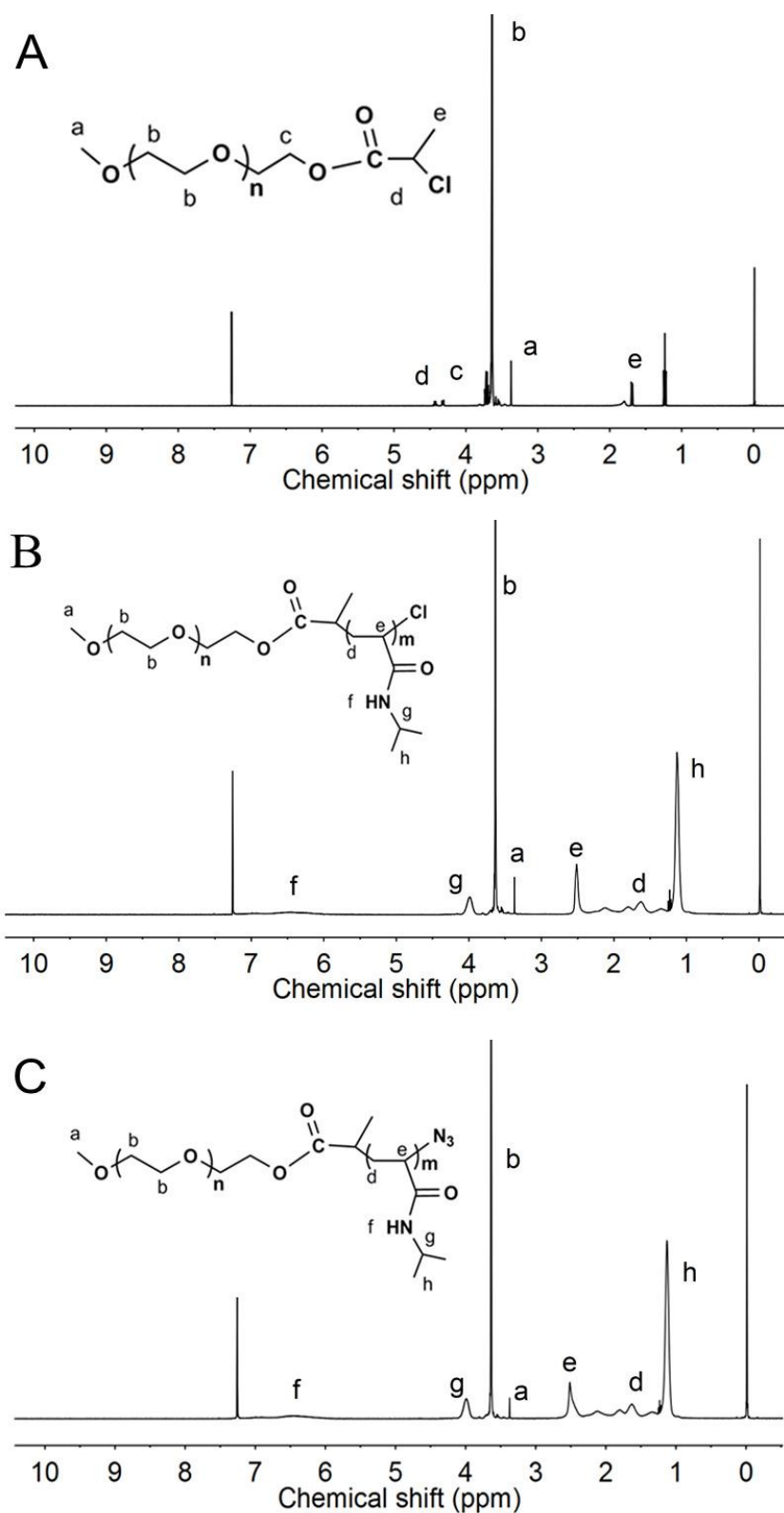


Figure S2. ^1H NMR spectra of PEG-Cl (A), PEG-*b*-PNIPAM-Cl (B) and PEG-*b*-PNIPAM-N₃ (C) in CDCl_3 .

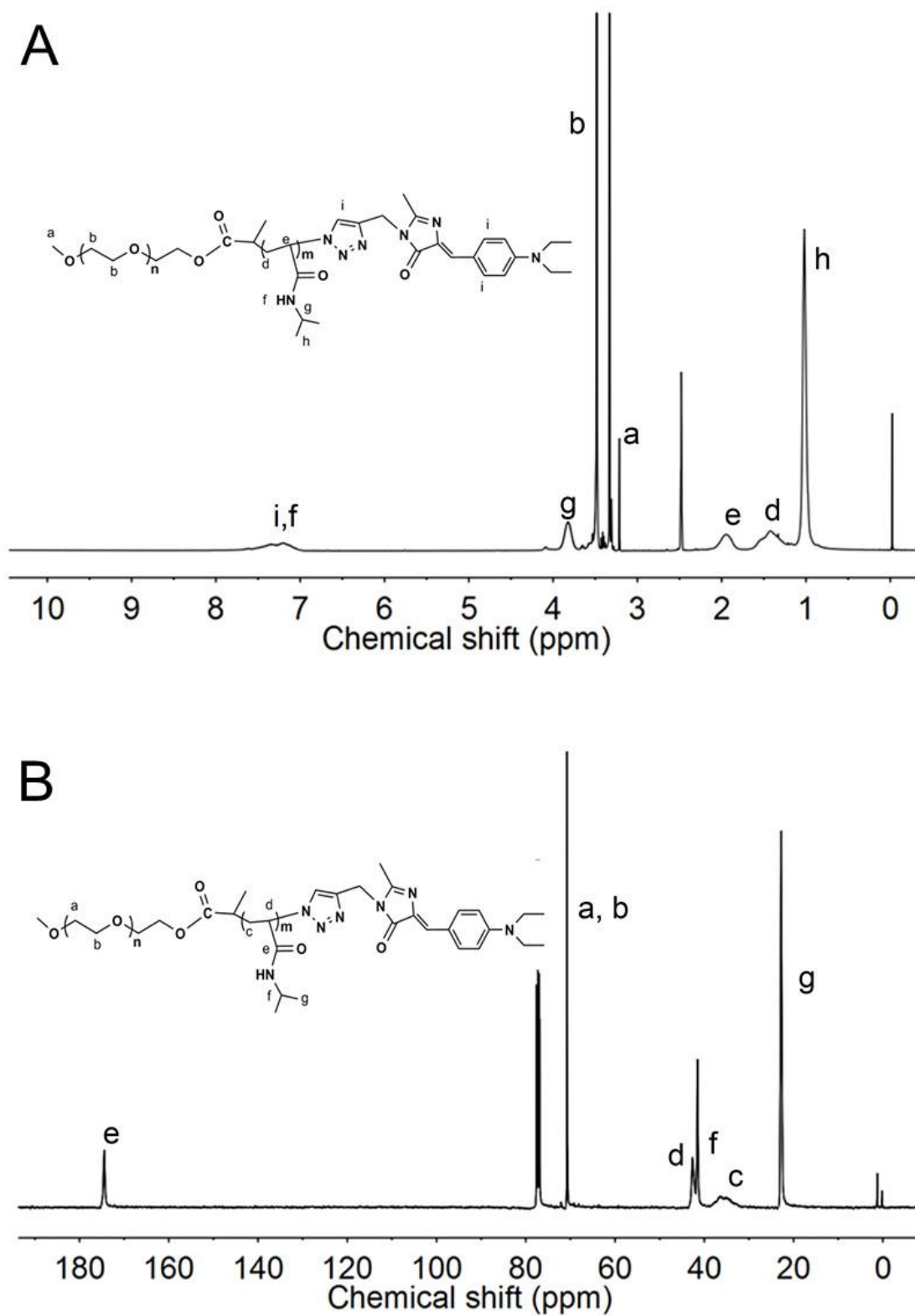


Figure S3. ^1H NMR (A) and ^{13}C NMR (B) spectra of PEG-*b*-PNIPAM-*c* in $\text{DMSO-}d_6$ and CDCl_3 , respectively.

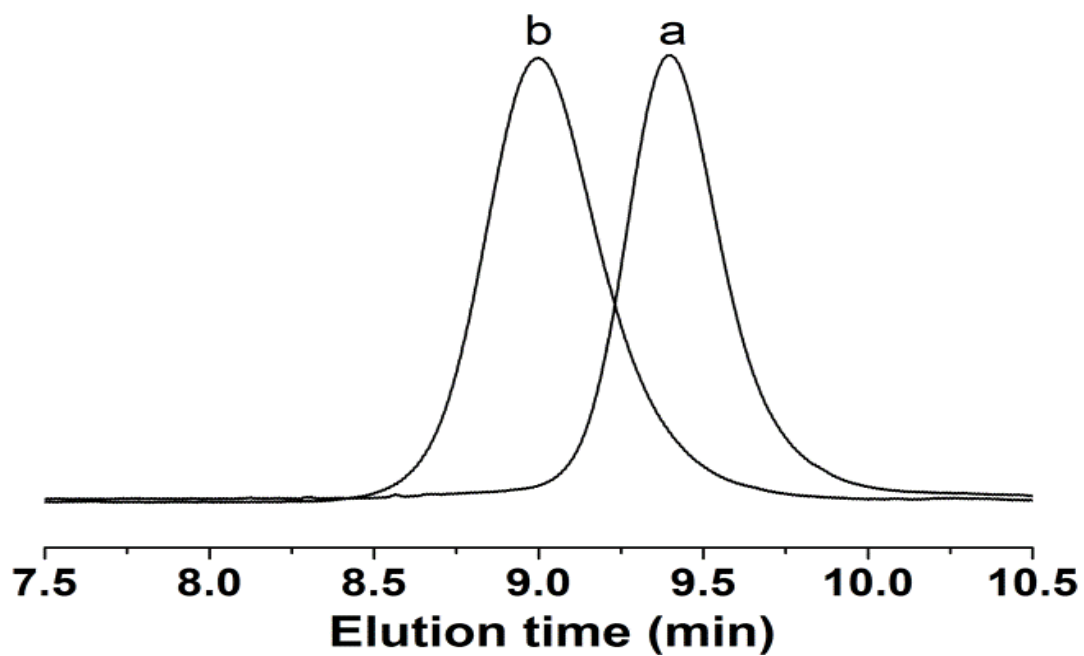


Figure S4. GPC curves of PEG-*b*-PNIPAM-Cl: (a) PEG₄₃-*b*-PNIPAM₃₉-Cl, (b) PEG₄₃-*b*-PNIPAM₁₃₆-Cl.

S-2 Emission spectra of PEG-*b*-PNIPAM-*c*

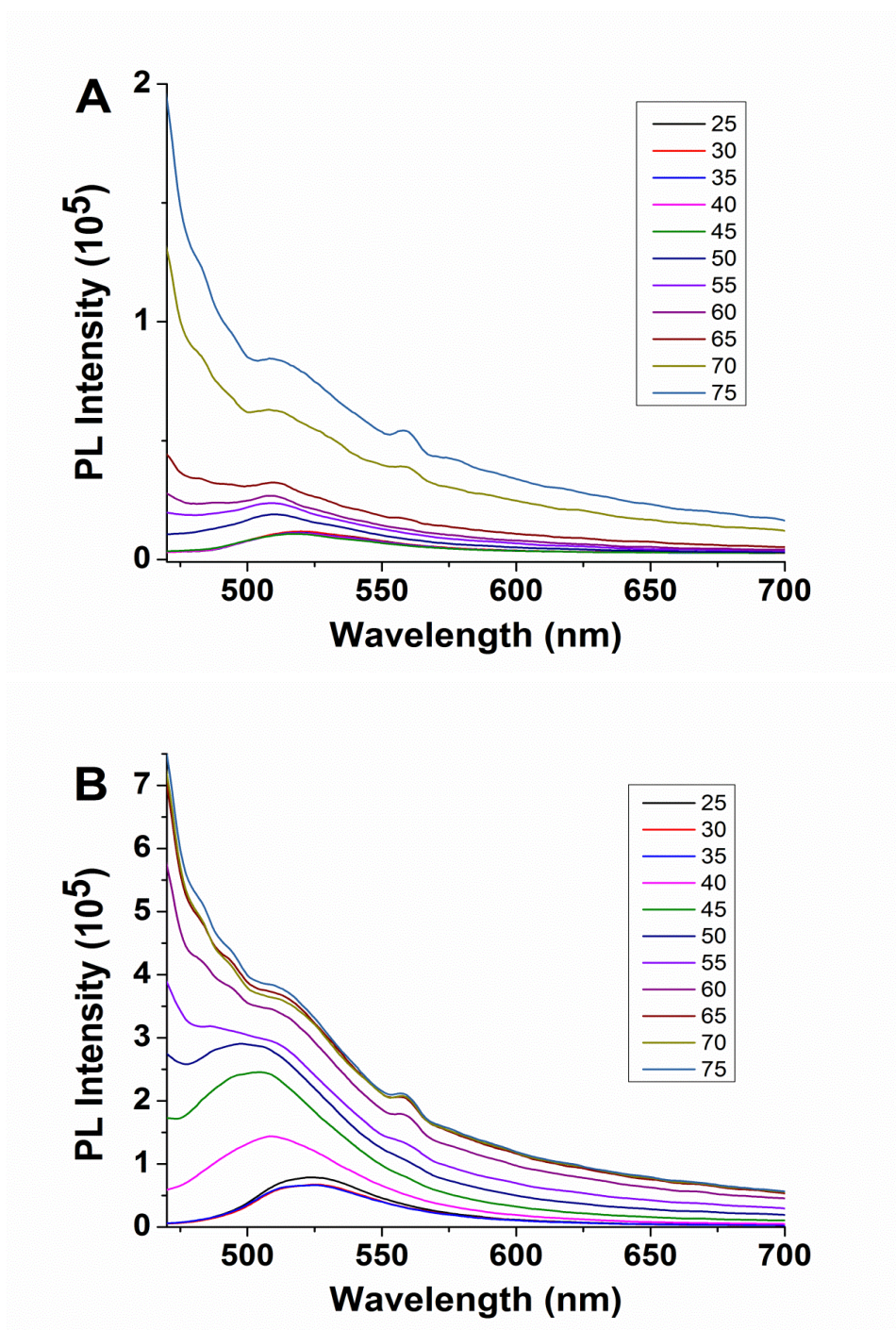


Figure S5. Emission spectra of PEG₄₃-*b*-PNIPAM₃₉-*c* (A) and PEG₄₃-*b*-PNIPAM₁₃₆-*c* (B) at 57 μM concentration in aqueous solution with variable temperatures at 25, 30, 35, 40, 45, 50, 55, 60, 65, 70 and 75 °C.

S-3 Control of *Bacillus thermophiles* after heating

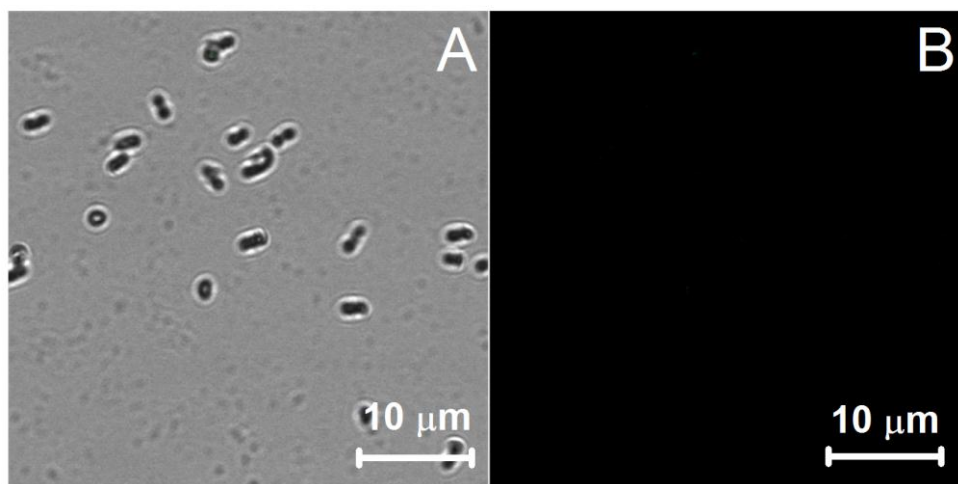


Figure S6. Laser scanning confocal microscopy images of *Bacillus thermophiles* after heating: (A) bright field, (B) excited wavelength at 435 nm.