Electronic Supplementary Material (ESI) for RSC Advances.

Enzyme and pH dual responsive linear-dendritic block copolymer micelles based on a phenylalanyl-lysine motif and peripherally ketal-functionalized dendron as potential drug carriers

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Spectroscopic Characterization

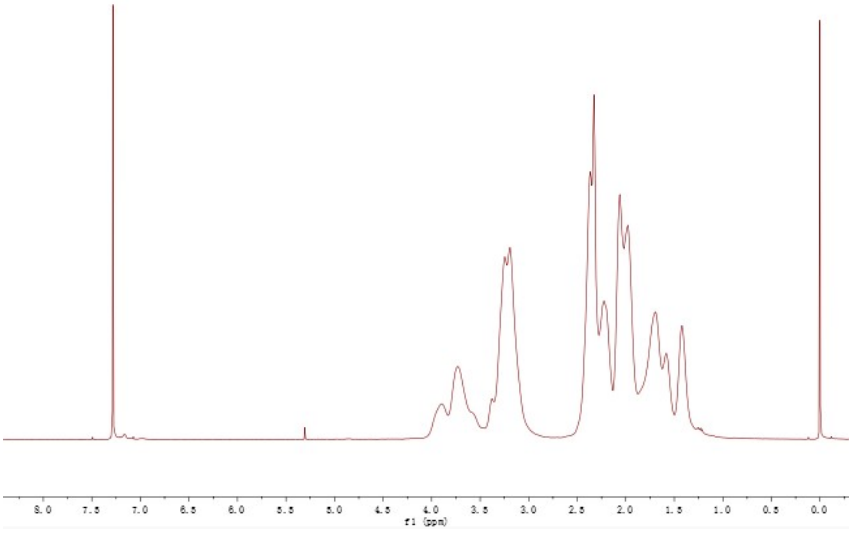

Fig. S1 ^{1}H NMR spectrum of PNVP-Phe-Lys-*b*-G_1 in $CDCl_3$.

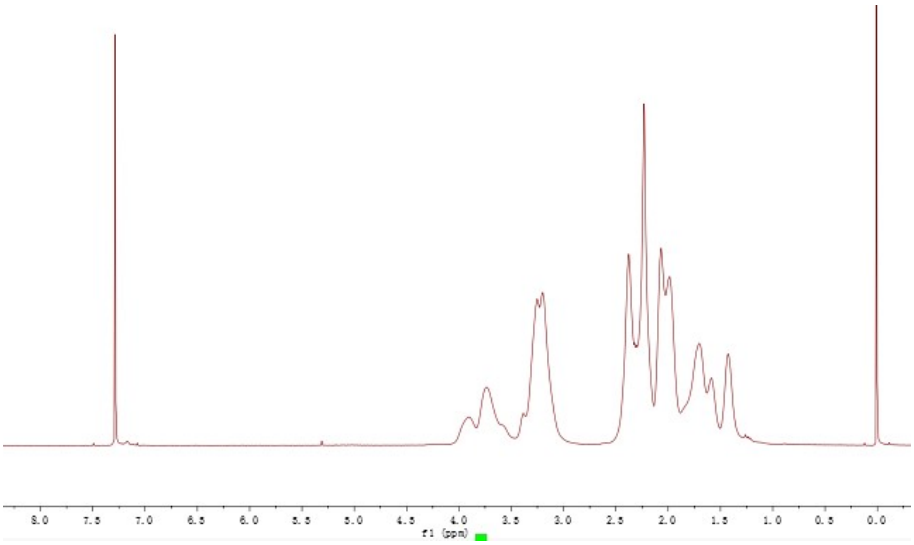

Fig. S2 ^{1}H NMR spectrum of PNVP-Phe-Lys-*b*-G_2 in $CDCl_3$.

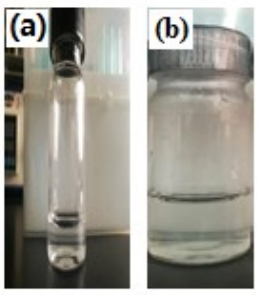

Fig. S3 PNVP-Phe-Lys-*b*-G_3 micelle solutions before and after the incubation with trypsin solution (75 μM) in 37 ℃ for 48 h.

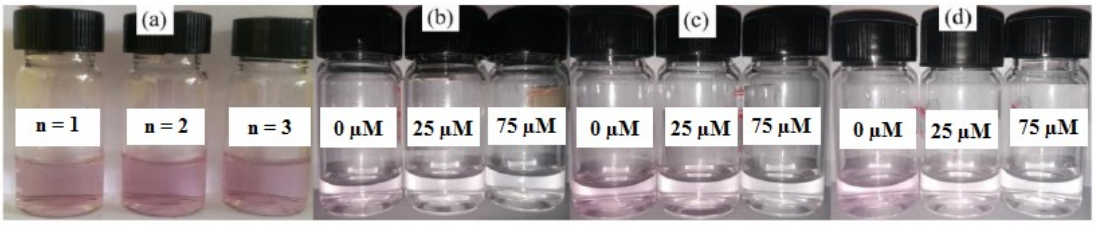

Fig. S4 Nile red loaded PNVP-Phe-Lys-*b*-G_n (n=1-3) micelle solutions (a) and after the incubation with different concentrations of trypsin (0 μM, 25μM, 75 μM) at 37 ℃ for 48 h ((b) for PNVP-Phe-Lys-*b*-G_1, (c) for PNVP-Phe-Lys-*b*-G_2, (d) for PNVP-Phe-Lys-*b*-G_3).

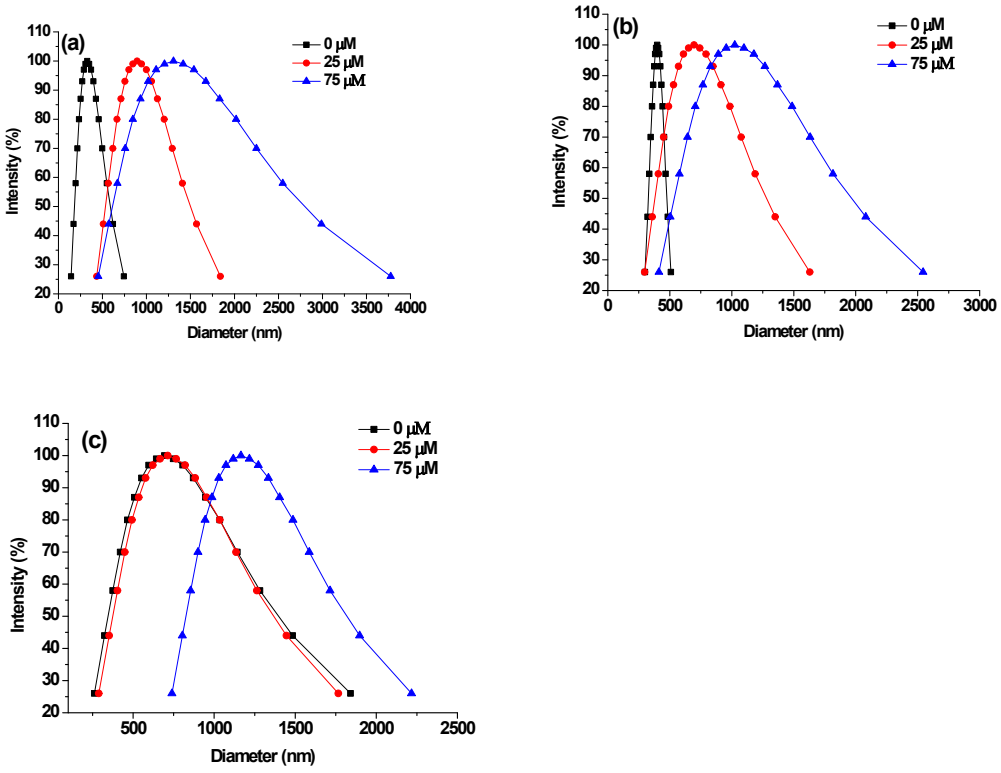

Fig. S5 The particle size of Nile red loaded micelles formed by PNVP-Phe-Lys-*b*-G_1 (a), PNVP-Phe-Lys-*b*-G_2 (b) and PNVP-Phe-Lys-*b*-G_3 (c) after the incubation with different concentrations of trypsin (0 μm, 25 μM and 75 μM).

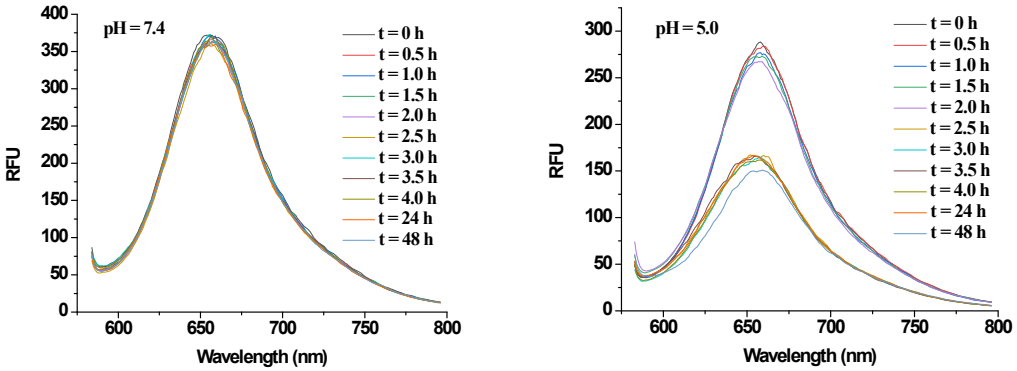

Fig. S6 Fluorescence spectra of Nile red in PNVP-Phe-Lys-*b*-G_1 micelles at pH 7.4 and pH 5.0.

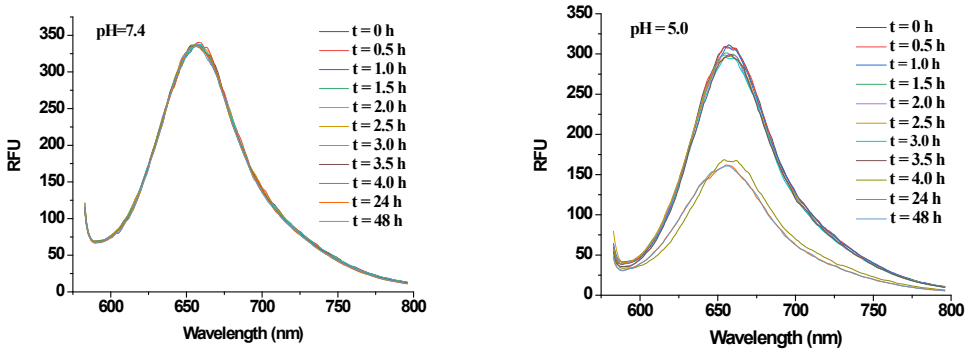

Fig. S7 Fluorescence spectra of Nile red in PNVP-Phe-Lys-*b*-G_2 micelles at pH 7.4 and pH 5.0.

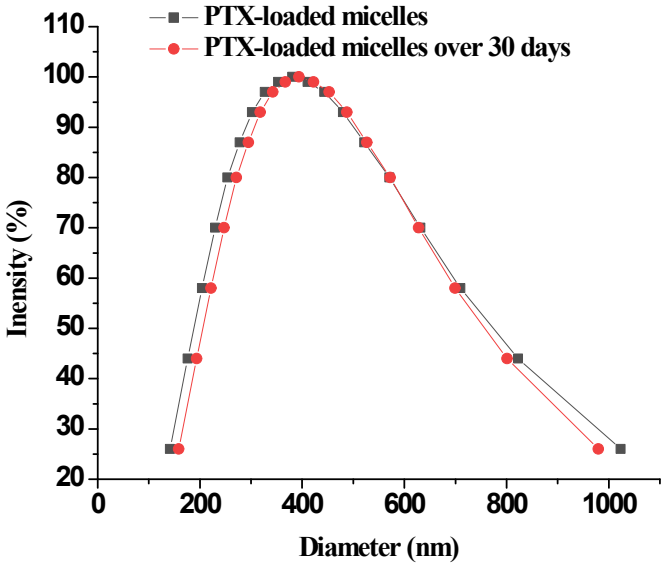

Fig. S8 The particle size of PTX-loaded micelles formed by PNVP-Phe-Lys-*b*-G_3.