Electronic Supplementary Material (ESI) for Journal of Materials Chemistry B.

Electronic Supplementary Information

Enzyme-instructed self-assembly leads to activation of optical properties for selective fluorescence detection and photodynamic ablation of cancer cells

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Figures

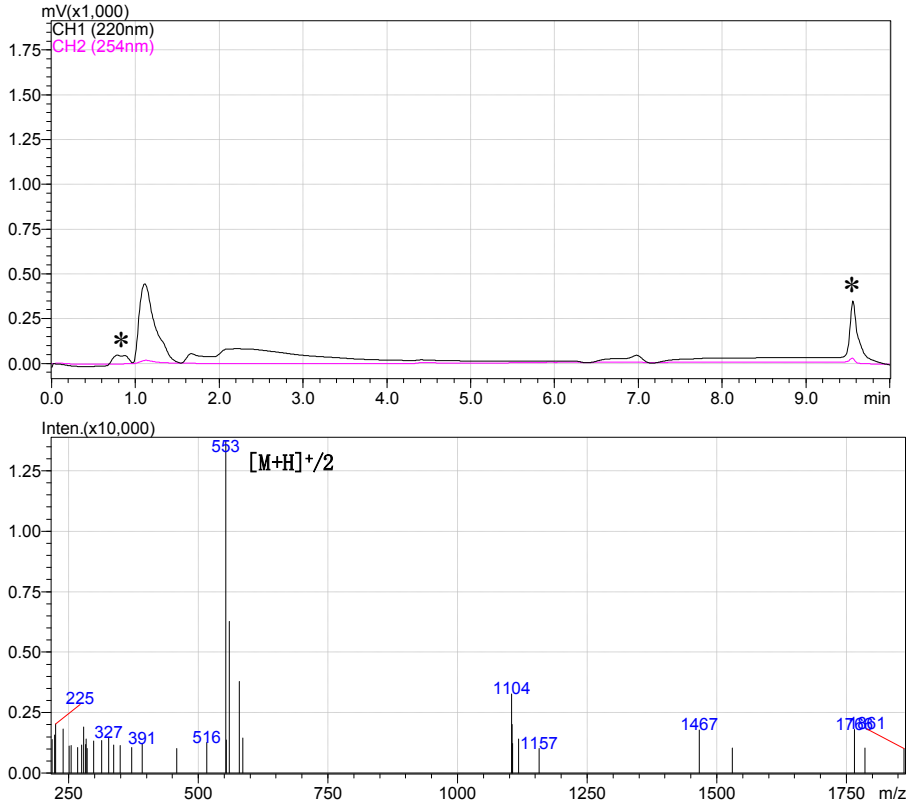

Fig. S1 LC-MS spectra of compound **2** (the stars represent systemic peaks).

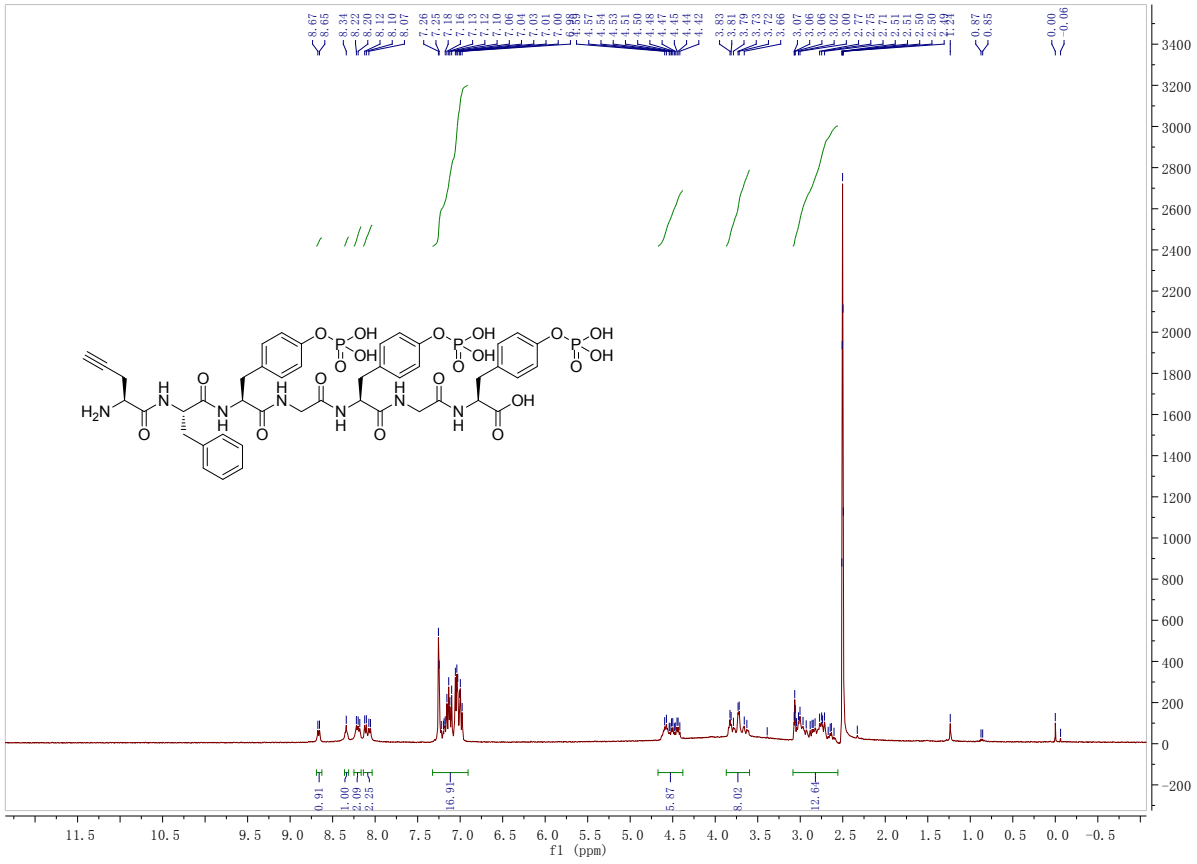

Fig. S2 ^{1}H NMR spectrum of compound **2** in DMSO-d_6.

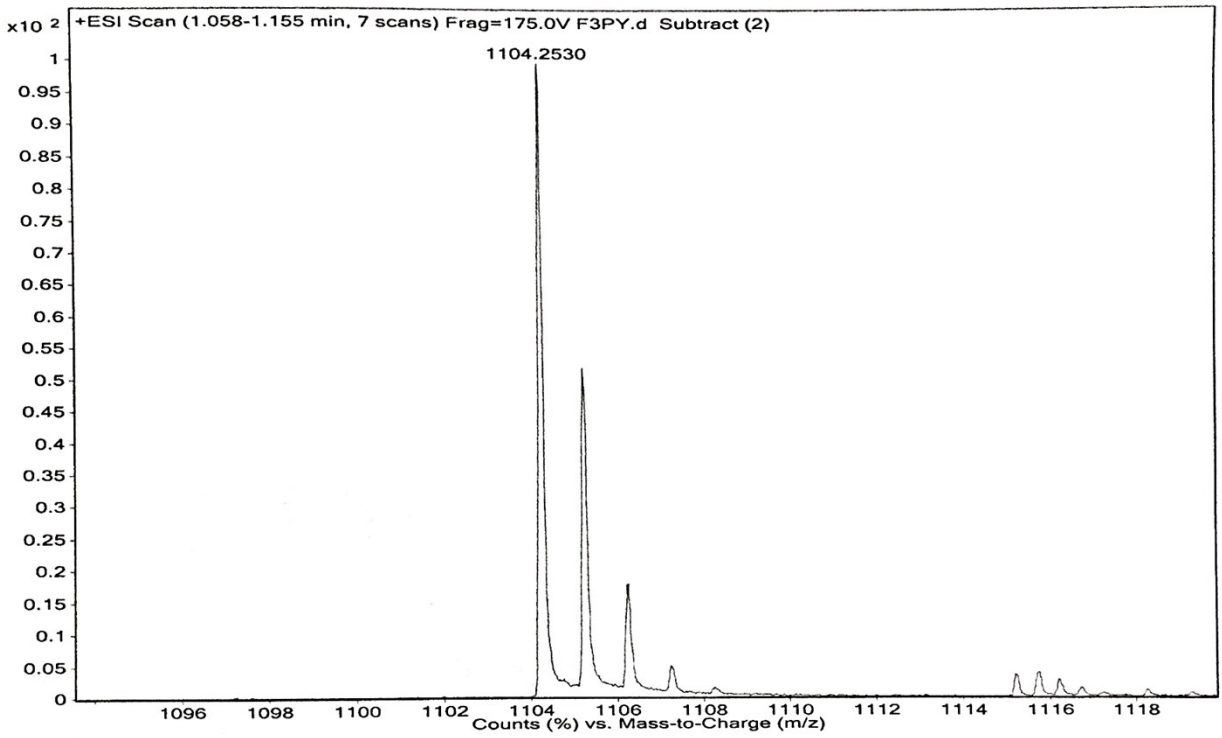

Fig. S3 HR-MS spectrum of compound **2**.

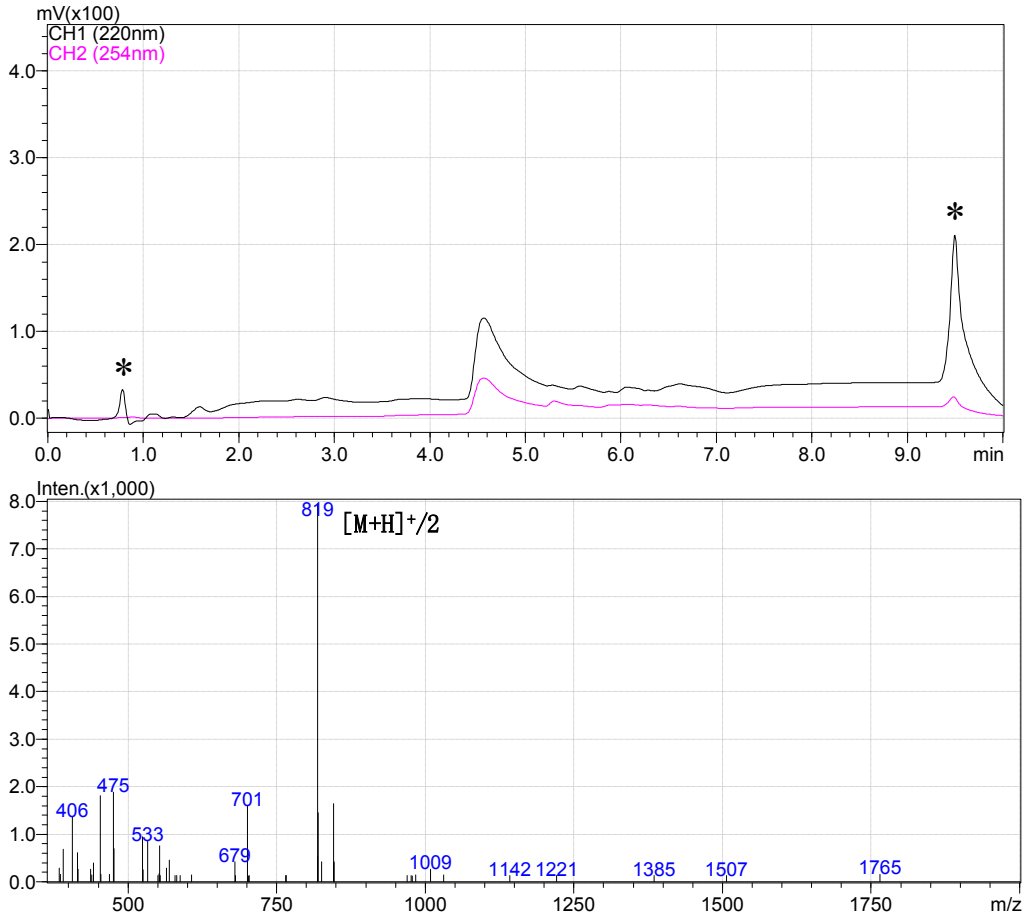

Fig. S4 LC spectra of TPE-Py-FpYGpYGpY (the stars represent systemic peaks).

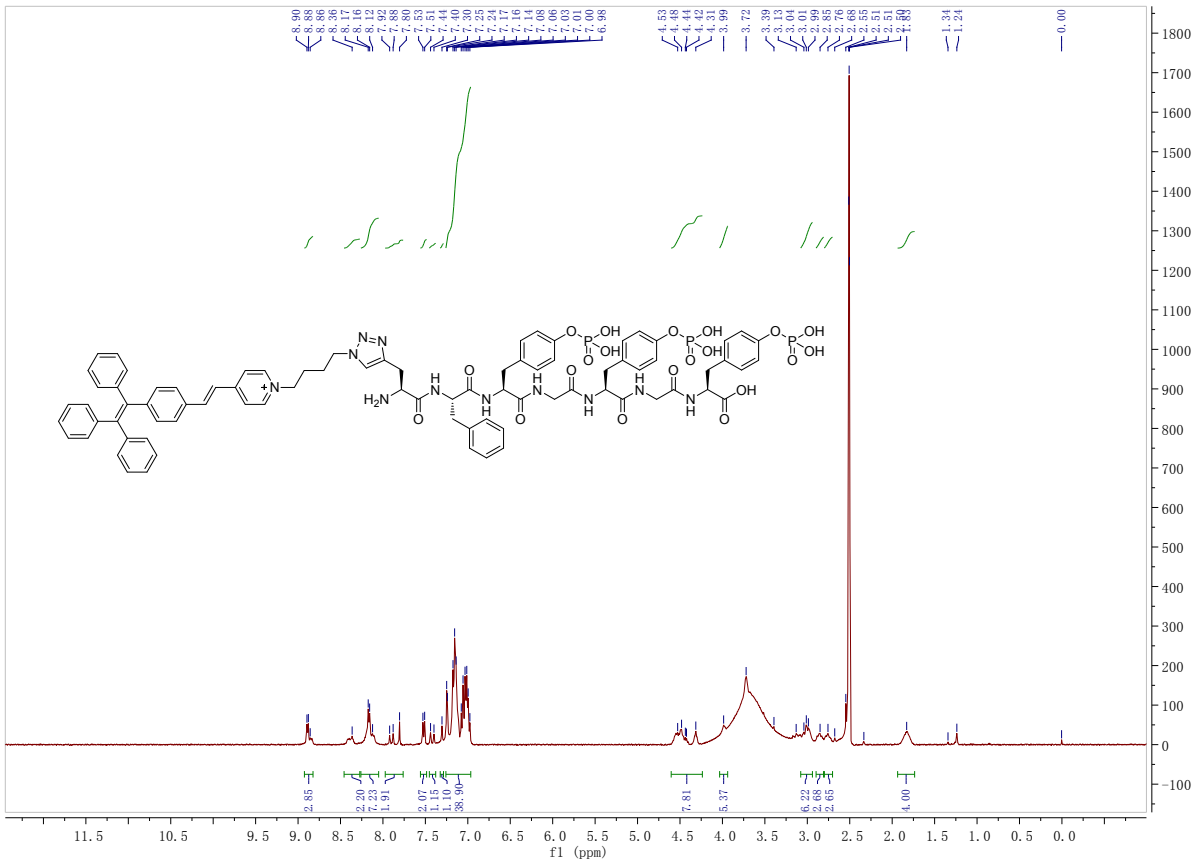

Fig. S5 ^{1}H NMR spectrum of TPE-Py-FpYGpYGpY in DMSO-d_6.

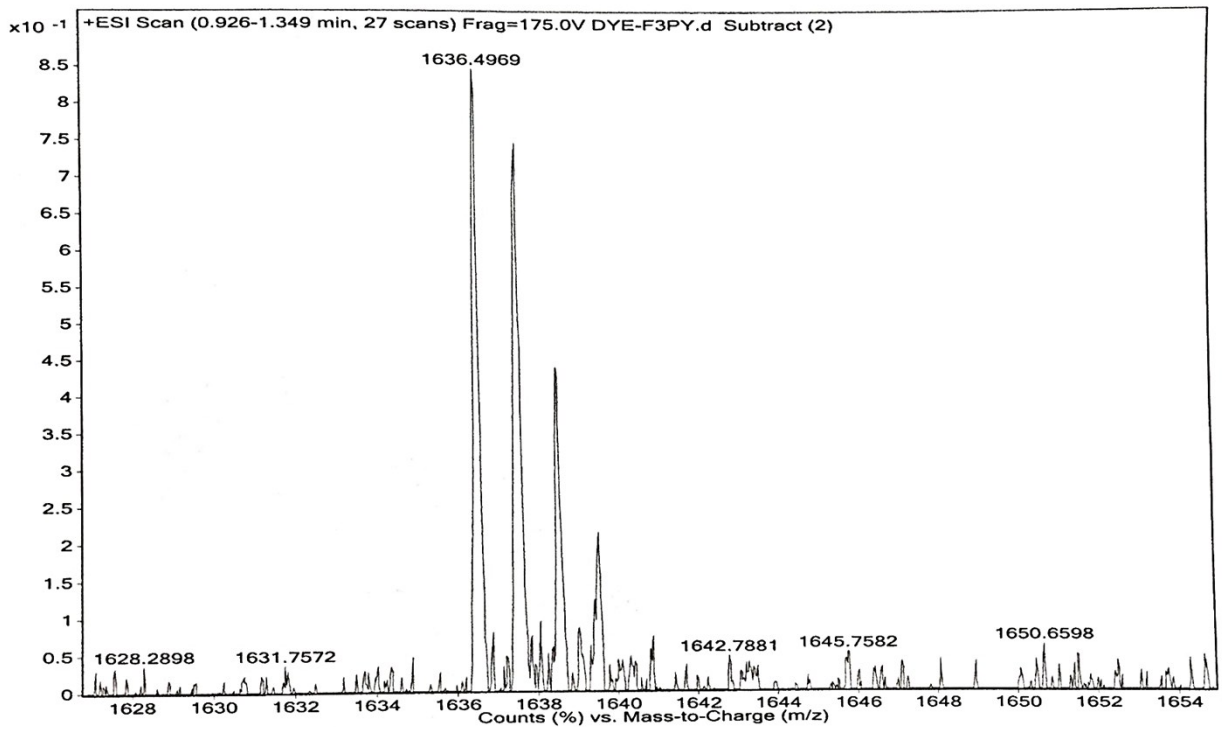

Fig. S6 HR-MS spectrum of TPE-Py-FpYGpYGpY.

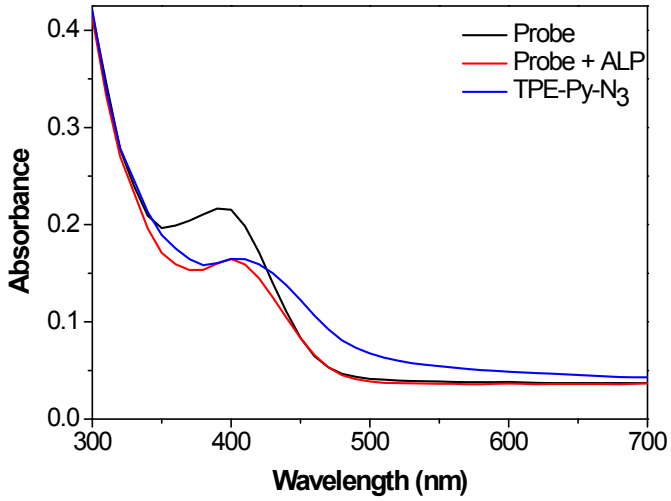

Fig. S7 UV-vis absorption spectra of different samples as indicated in PBS buffer.

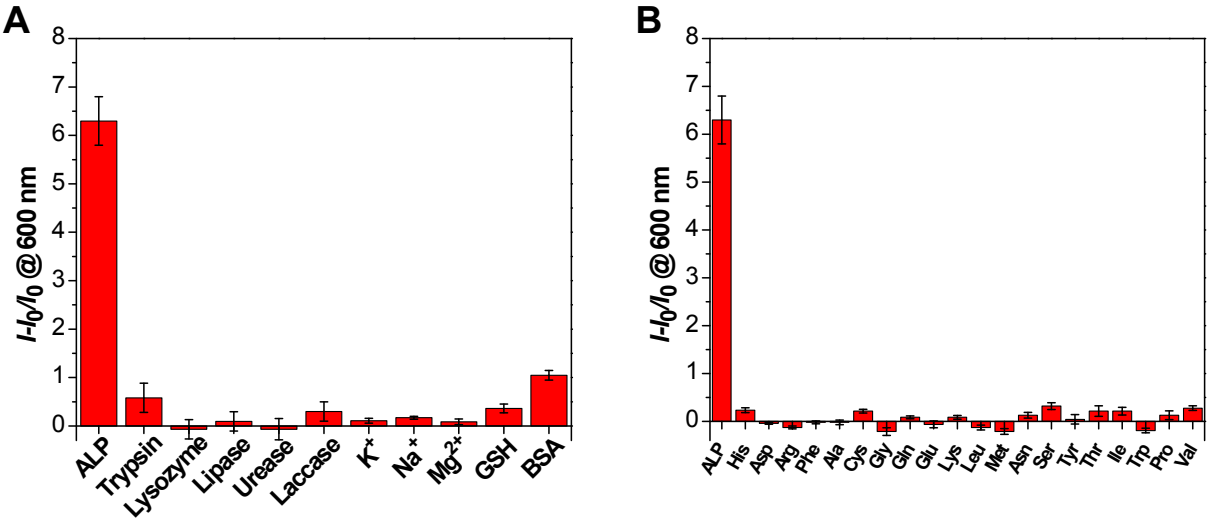

Fig. S8 Plot of $(I-I_0)/I_0$ *versus* (A) different enzymes, important ions and biomolecules as well as (B) various amino acids. I and I_0 are the PL intensities at 600 nm of TPE-Py-FpYGpYGpY (10 μM) with and without treatment at 37 °C for 30 min. 1 U mL^{-1} for ALP, lysozyme, lipase, and urease; 100 μg mL^{-1} for trypsin and laccase; 1 mM for K^+, Na^+, Mg^{2+}, GSH, and amino acids.

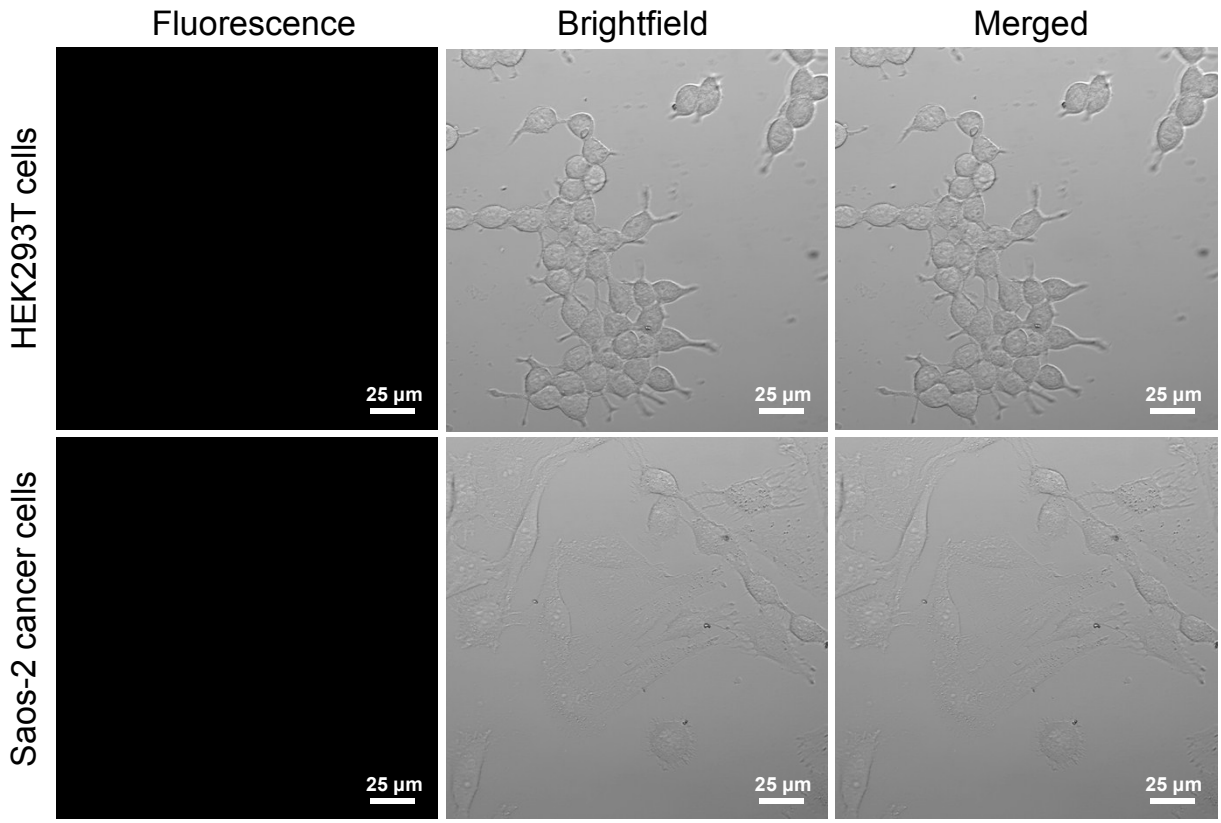

Fig. S9 CLSM images of live HEK293T cells and Saos-2 cancer cells without any probe incubation.

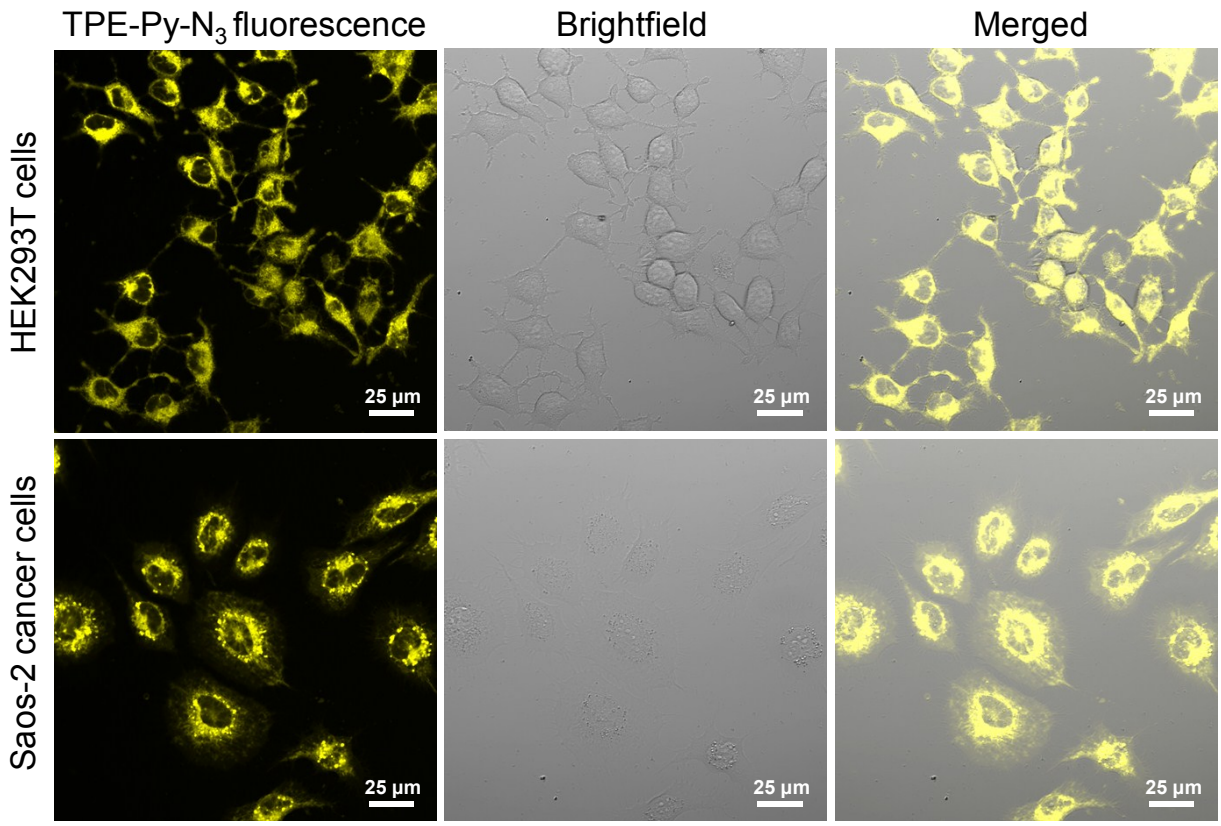

Fig. S10 CLSM images of live HEK293T cells and Saos-2 cancer cells incubated with TPE-Py-N_3 (5 μM) at 37 °C for 2 h.

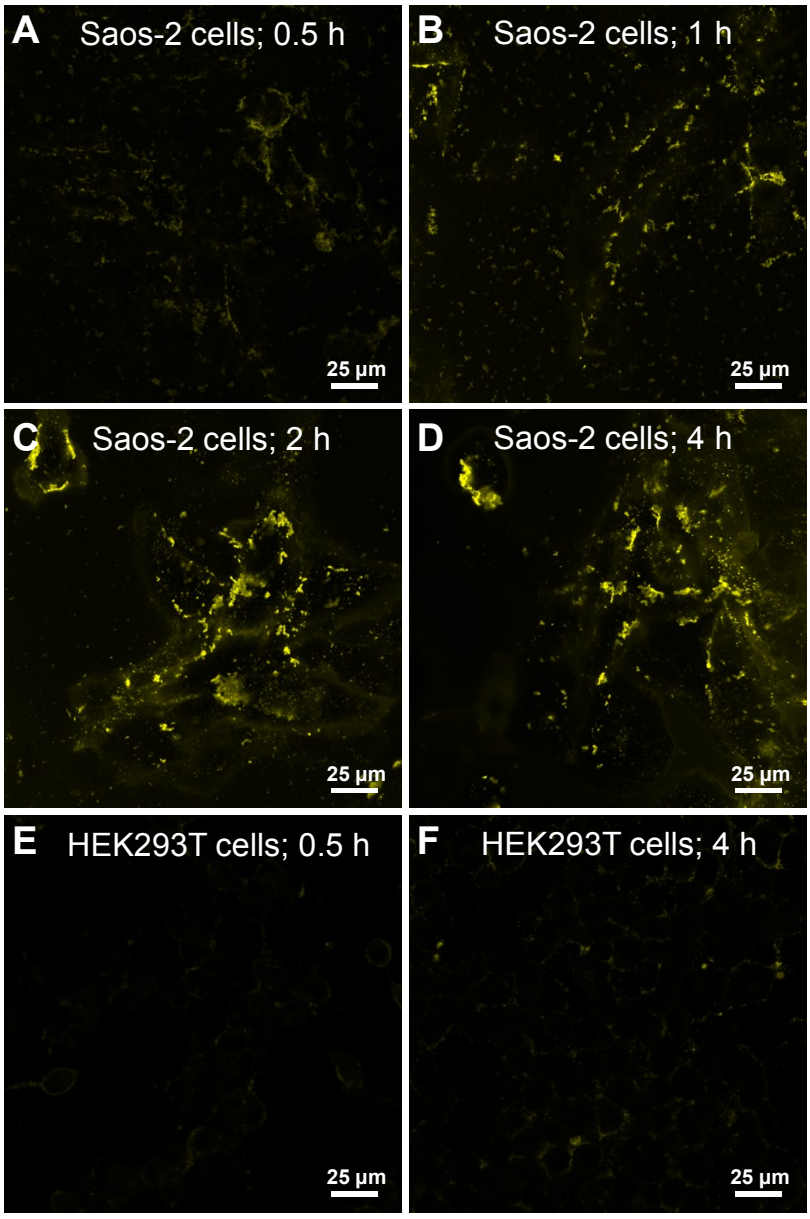

Fig. S11 CLSM images of Saos-2 cancer cells incubated with TPE-Py-FpYGpYGpY (10 μM) at 37 °C for (A) 0.5 h, (B) 1 h, (C) 2 h, and (D) 4 h. CLSM images of HEK293T cells incubated with TPE-Py-FpYGpYGpY (10 μM) at 37 °C for (E) 0.5 h and (F) 4 h.

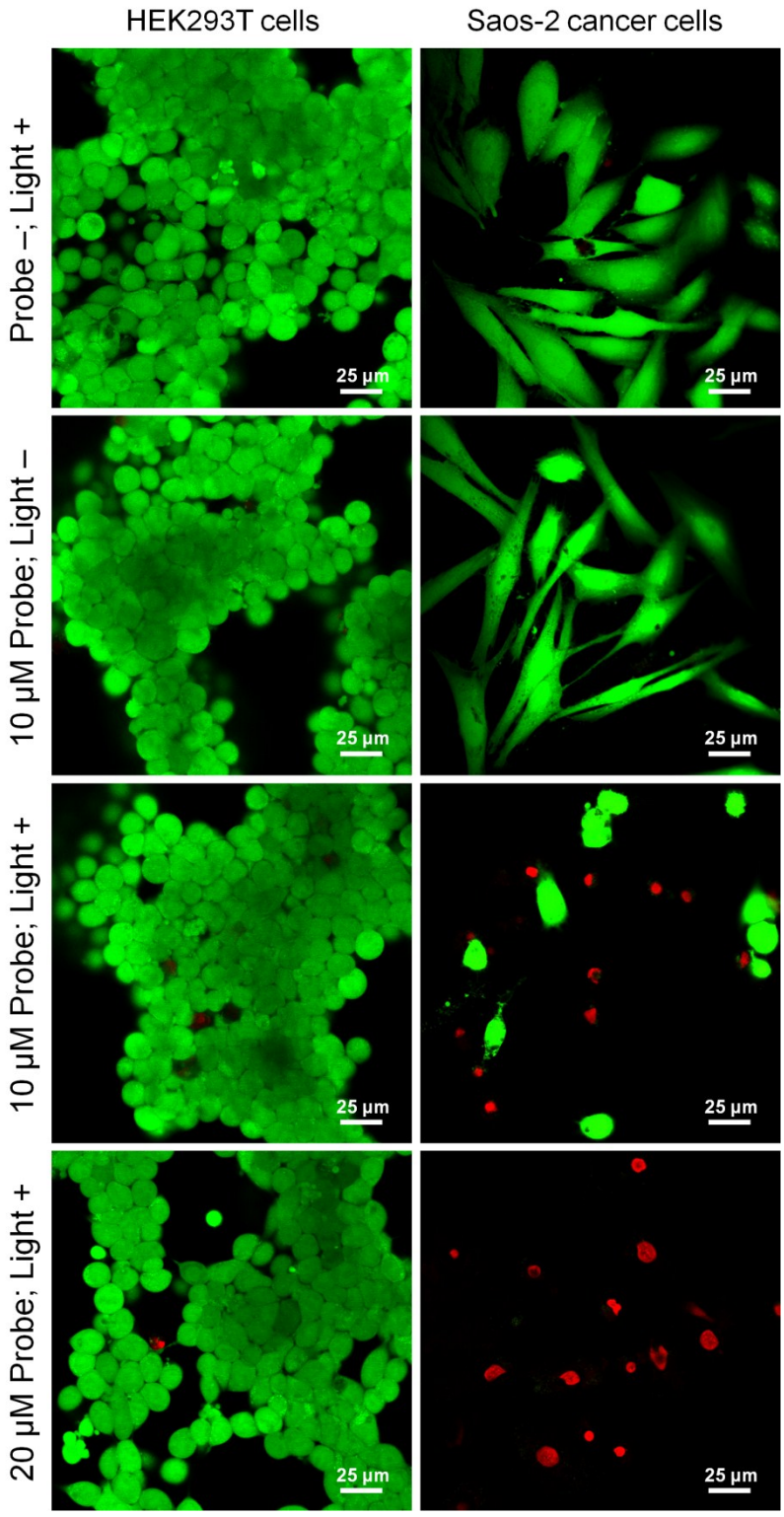

Fig. S12 Live/dead staining with CLSM imaging verifies the PDT efficacy of the probe on HEK293T cells and Saos-2 cancer cells.