Electronic Supplementary Information

Poly(γ-glutamic acid)-stabilized iron oxide nanoparticles: Synthesis, characterization and applications for MR imaging of tumors†

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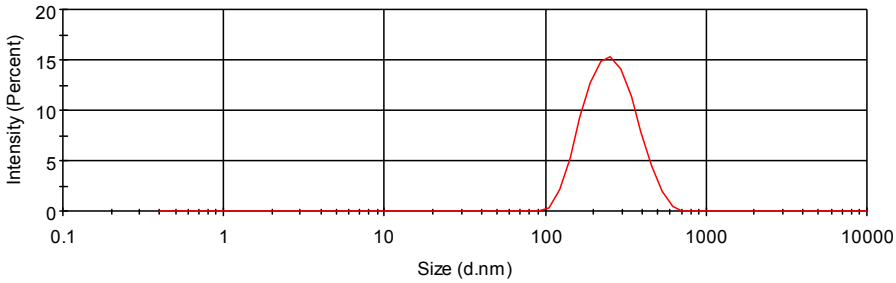

Figure S1. The hydrodynamic size distribution histogram of the Fe_3O_4-PGA NPs dispersed in water.

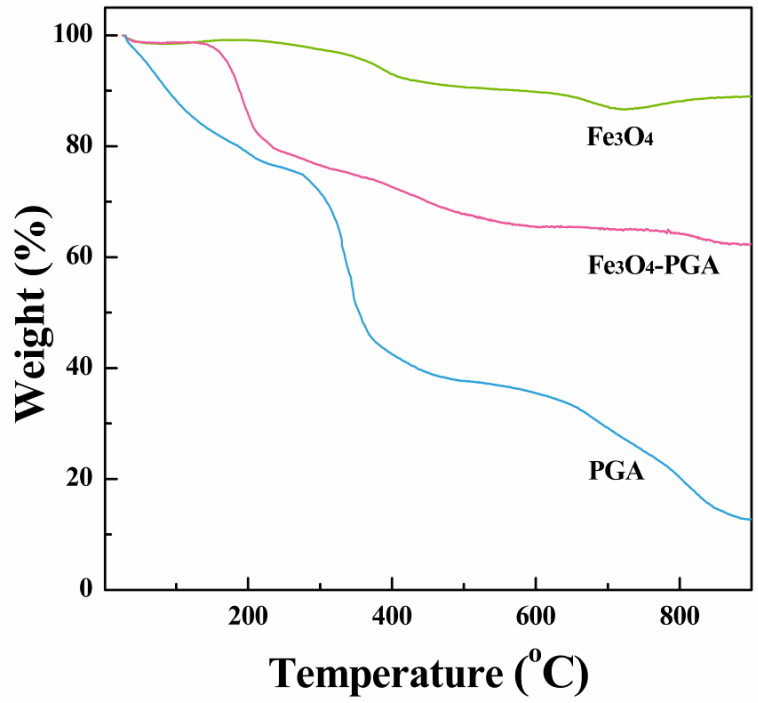

Figure S2. TGA curves of the naked Fe_3O_4 NPs, Fe_3O_4-PGA NPs, and PGA.

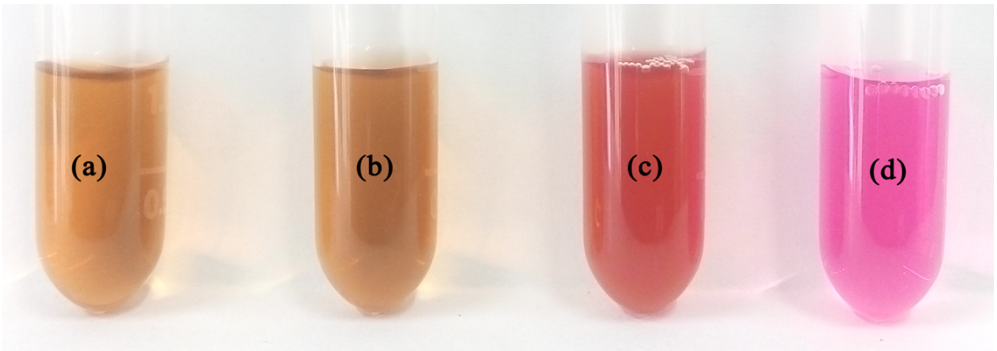

Figure S3. Photographs of the Fe_3O_4-PGA NPs ([Fe] = 0.25 mg/mL) dispersed in water (a), normal saline (b), cell culture medium (c) for two weeks. (d) shows the blank cell culture medium.

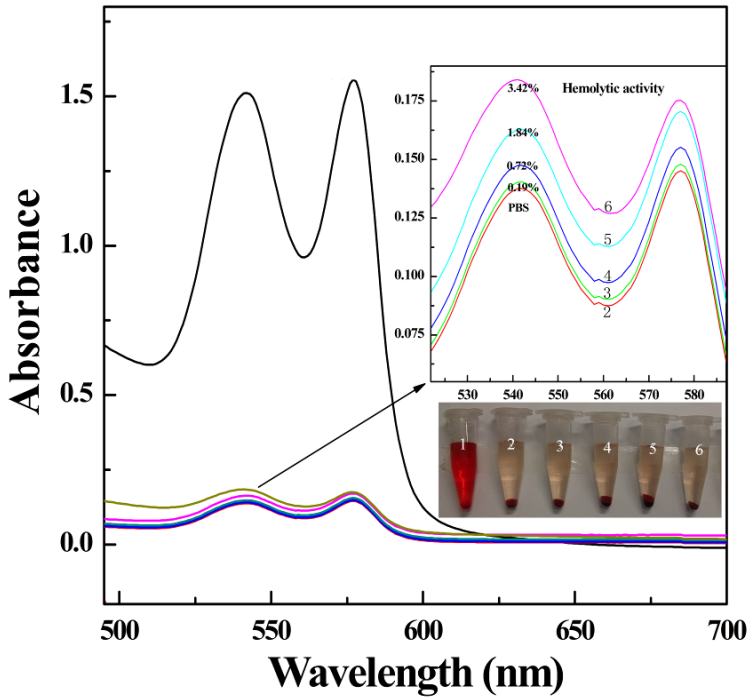

Figure S4. Hemolytic activity of the Fe_3O_4-PGA NPs at different Fe concentrations (50, 150, 250, 350, and 450 μg/mL, respectively). NS and water were used as negative and positive control, respectively. The bottom-right inset shows the photograph of HRBCs exposed to water, NS, and NS containing the Fe_3O_4-PGA NPs at different Fe concentrations for 2 h, followed by centrifugation. The upper-right inset shows the enlarged UV-vis spectra indicated by the arrow.

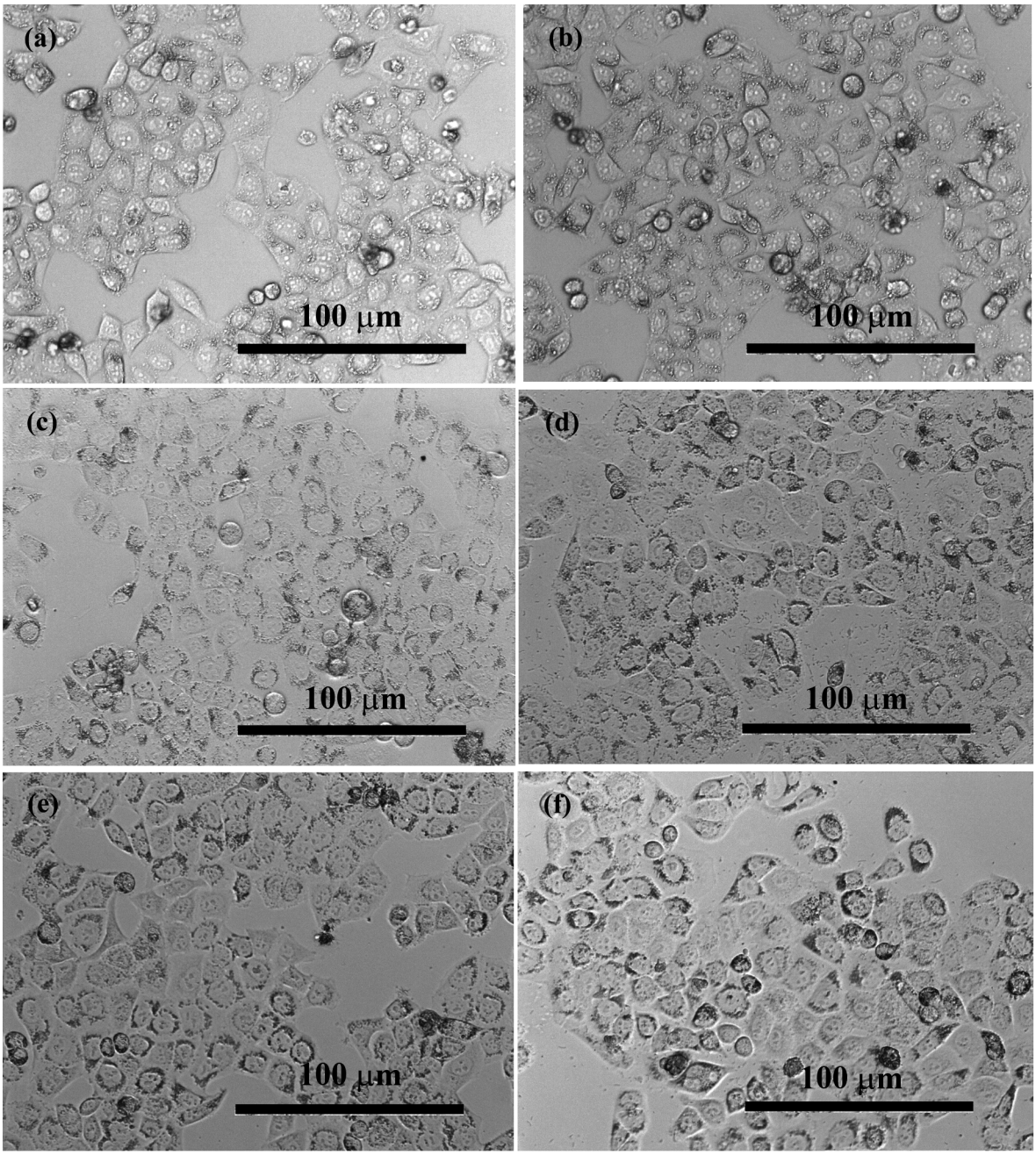

Figure S5. Phase contrast microscopic images of HeLa cells treated with NS (a) and the Fe_3O_4-PGA NPs at the Fe concentrations of 50 (b), 150 (c), 250 (d), 350 (e), and 450 (f) μg/mL for 24 h.

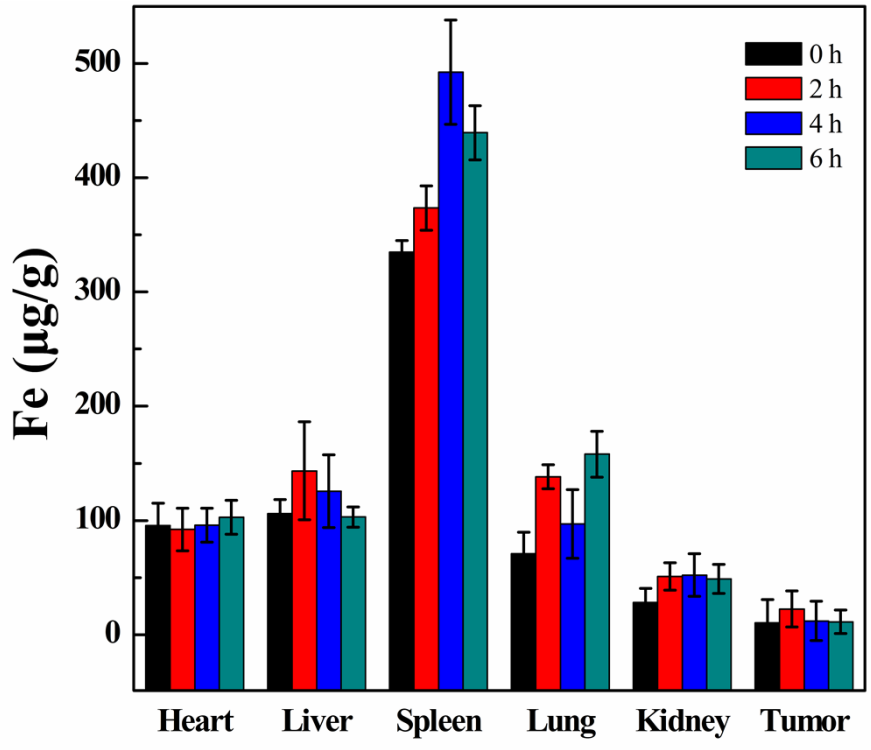

Figure S6. Biodistribution of Fe in the major organs of mice including the heart, liver, spleen, lung, kidney, and tumor at different time points post intravenous injection of the Fe_3O_4-PGA NPs (0.1 mL in NS solution, [Fe] =1 mg/mL).