Electronic Supplementary Material (ESI) for RSC Advances.

Supplementary Information

An affinity triggered MRI nanoprobe for pH-dependent cell labeling

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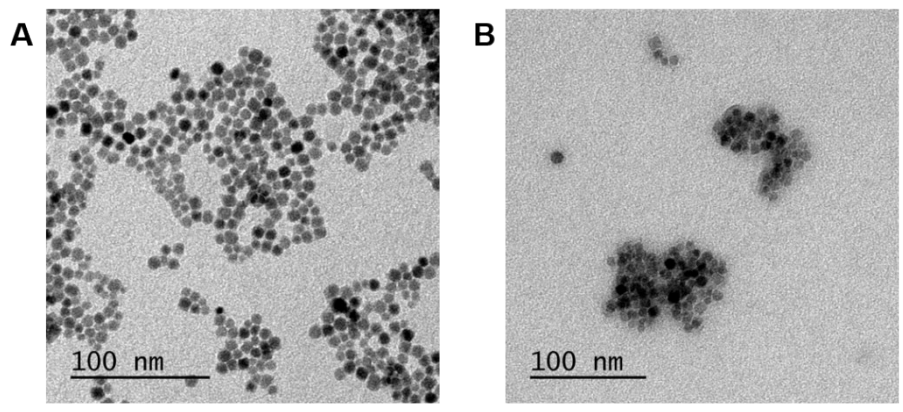

Figure S1. Transmission Electron Microscopy (TEM) images of (A) MNP-DMSA and (B) MNP-DMSA-PLLib-Nav-bPEG.

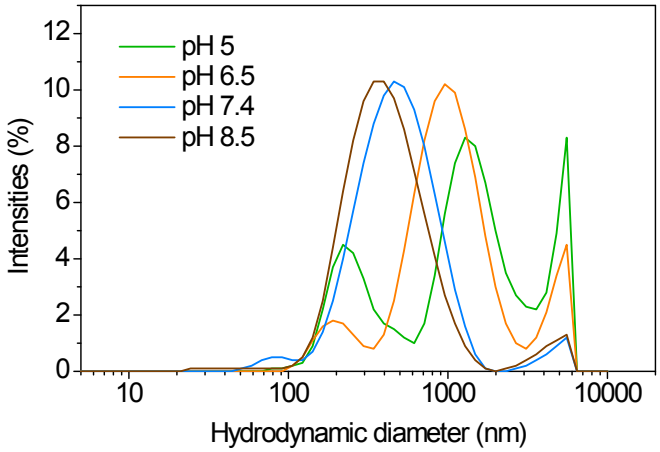

Figure S2. Variation of multilayer nanoparticles size distribution after being exposed to PBS at different pHs for 20 h.

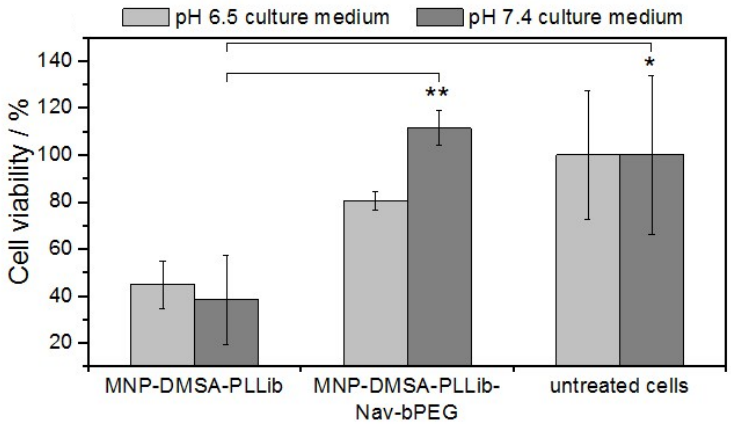

Figure S3. Cell viability, by Trypan blue cell counting (n =2), after 5 h of incubation with MNP-DMSA-PLLib-Nav-bPEG at 10 µg Fe/ml in acidic (pH 6.5) and physiological (pH 7.4) culture medium

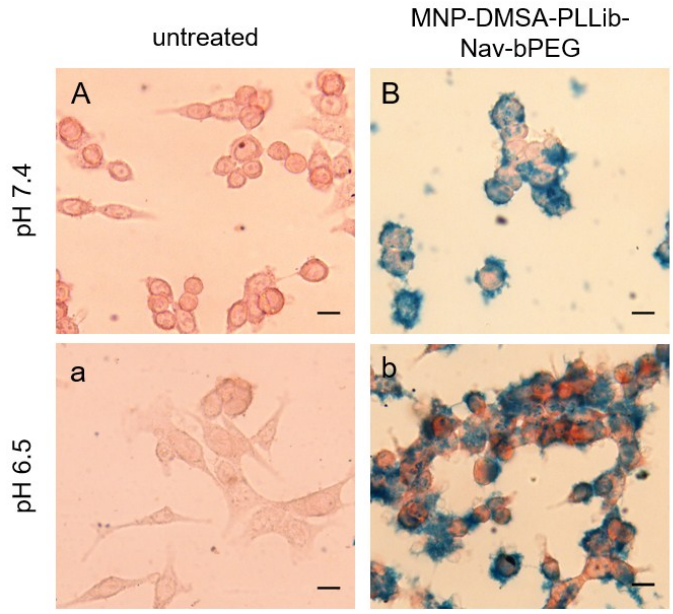

Figure S4. Bright field microscopy images of preparations stained with Prussian blue for iron identification, obtained after exposing HCT116 cells to multilayer nanoparticles at 10 µg Fe/ml for 5 h. (A, B) cells incubated in physiological culture medium. (a, b) cells incubated in acidic culture medium. (A and a) untreated cells; (B and b) MNP-DMSA-PLLib-Nav-bPEG. Scale bar: 10 µm.

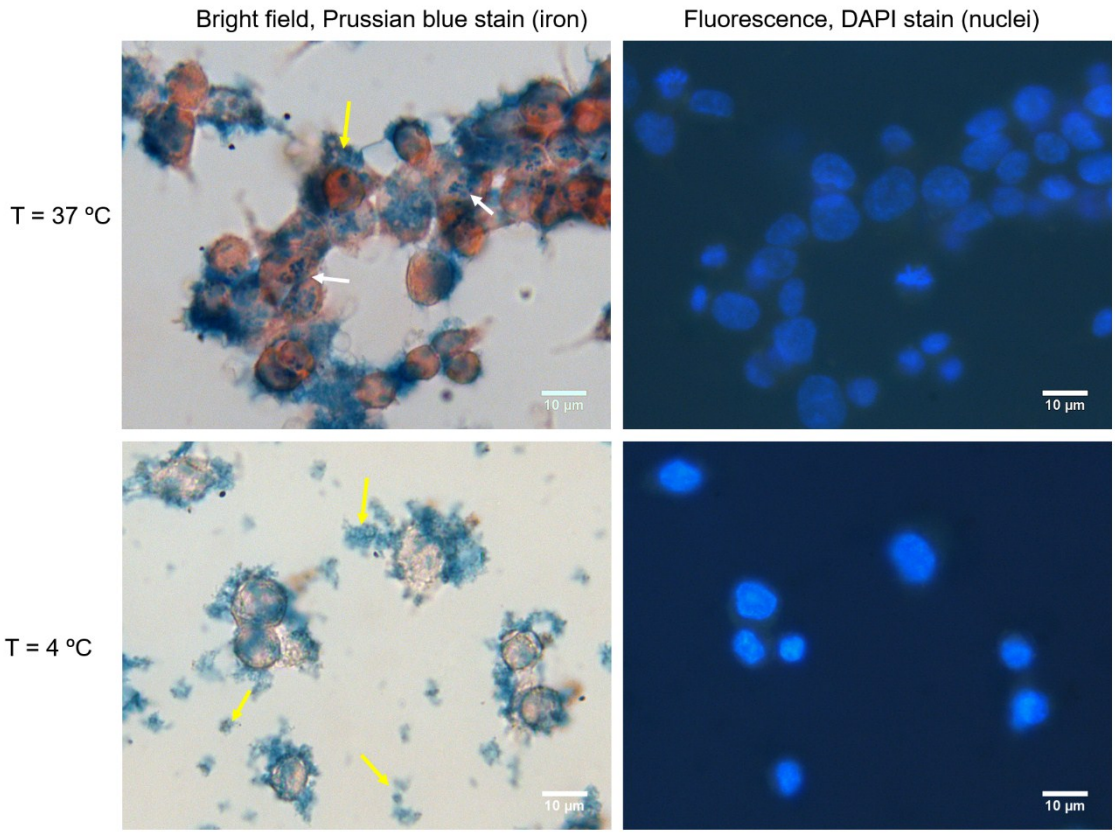

Figure S5. Bright field and fluorescence microscopy images of preparations stained with Prussian blue for iron identification and DAPI for nuclei identification. HCT116 cells were incubated for 5 h with nanoparticles at 10 µg Fe /ml, under acidic conditions at 37 °C and at 4 °C. White arrows indicate internalized iron; yellow arrows indicate iron attached to cell membranes and dispersed in the medium.