**Supporting information for:**

# Construction of Multifunctional $Fe_3O_4$-MTX@HBc Nanoparticles for MR Imaging and Photothermal Therapy/Chemotherapy

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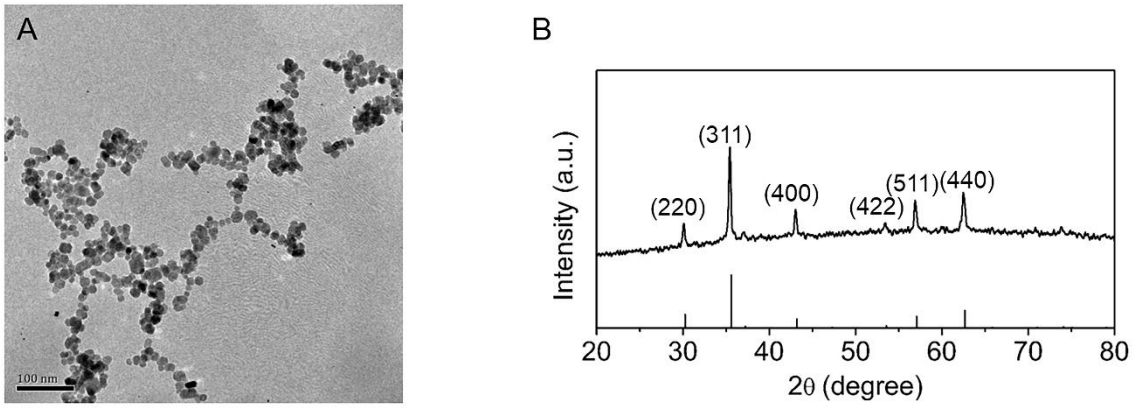


**Figure S1.** Characterization of the as-prepared $Fe_3O_4$ nanoparticles: (A) TEM image of $Fe_3O_4$ nanoparticles. The size of nanoparticles was in range of 10-15 nm as shown in the image; (B) The diffractogram of the as-prepared $Fe_3O_4$ nanoparticles (JCPDS no. 65-3107).

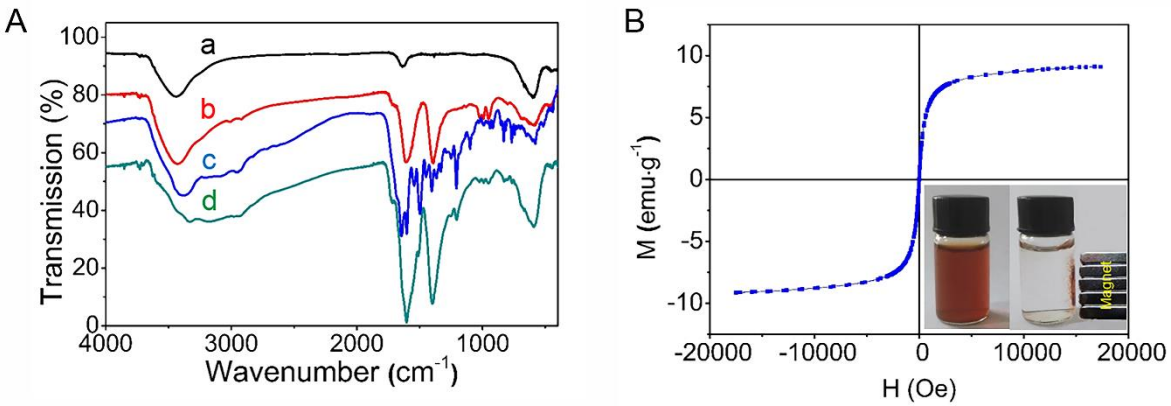


**Figure S2**. (A) The FT-IR spectra of nanoparticles (a: $Fe_3O_4$, b: $Fe_3O_4$-DMSA, c: MTX，and d: $Fe_3O_4$-MTX); (B) Magnetic hysteresis loop of the $Fe_3O_4$-MTX NPs and images of $Fe_3O_4$-MTX NPs aqueous dispersion in magnetic field.

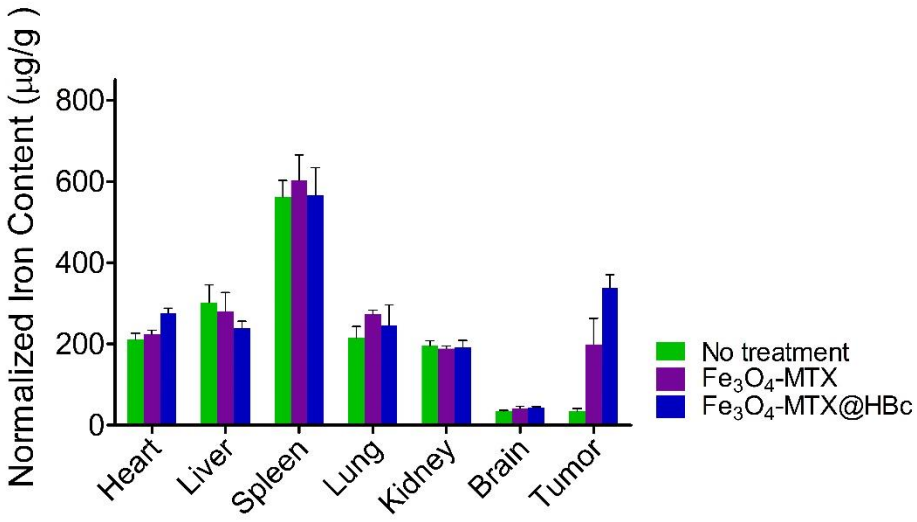


**Figure S3.** Normalized iron content in different tissues and tumors after respectively injecting $Fe_3O_4$-MTX NPs and $Fe_3O_4$-MTX@HBc NPs for 2 h. The normalized iron content (μg/g) was defined as the amount of $Fe^{3+}$per gram tissue weight (n = 3).