

**Matrix metalloproteinase-2-targeted superparamagnetic Fe₃O₄-PEG-G5-MMP2@Ce6
nanoprobes for dual-mode imaging and photodynamic therapy**

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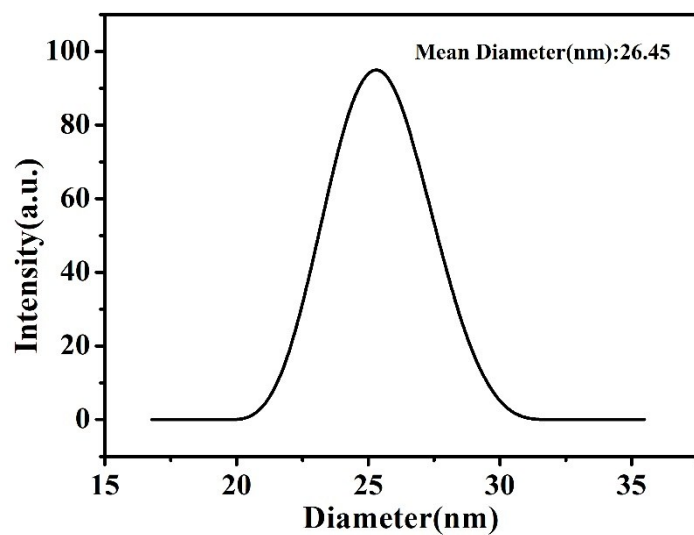


Figure S1. DLS measurement of Fe₃O₄ NPs. PDI=0.246

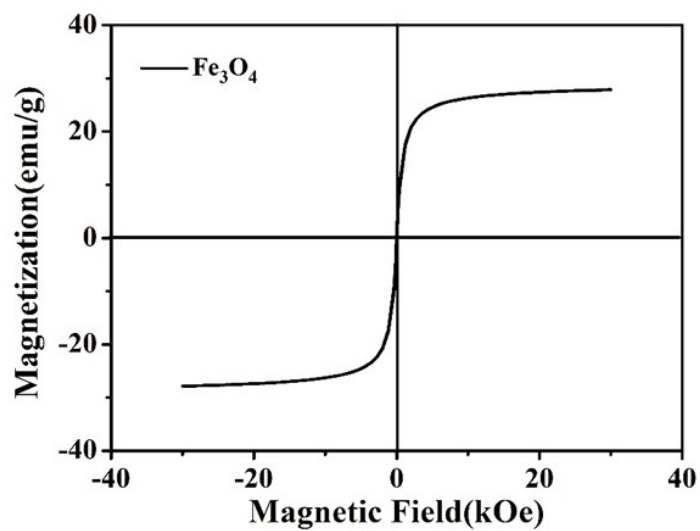


Figure S2. The magnetization curve of Fe₃O₄ NPs at room temperature.

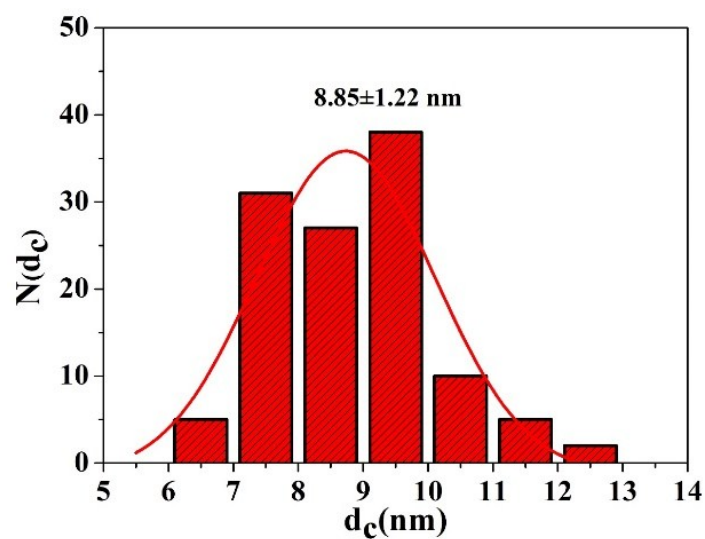


Figure S3. Size distribution of the Fe₃O₄-PEG-G5-MMP2@Ce6 nanoprobes.

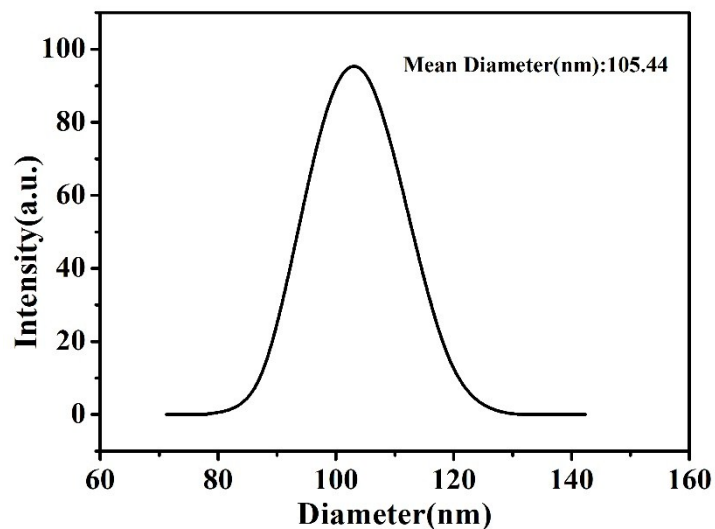


Figure S4. DLS measurement of Fe₃O₄-PEG-G5-MMP2@Ce6 nanoprobes in aqueous solution. PDI=0.211

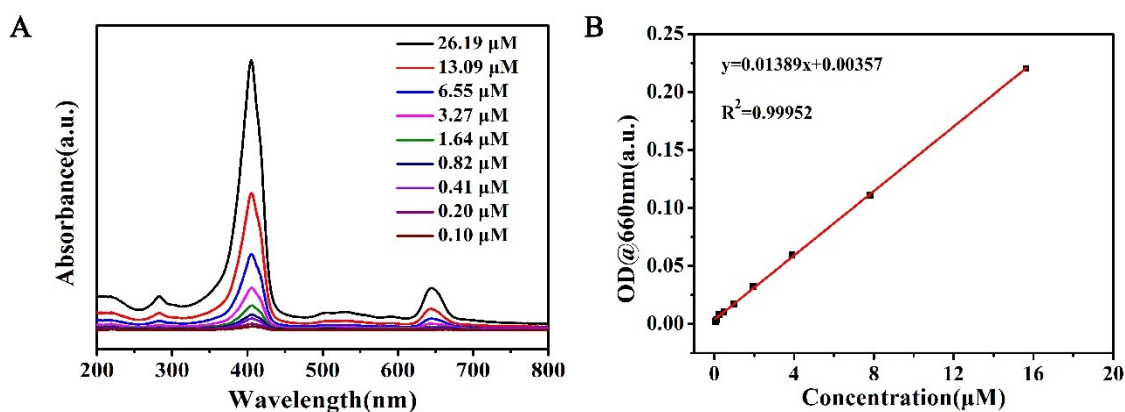


Figure S5. (A) UV-vis absorption spectroscopy of Ce6 at different concentrations. (B) Standard curve of Ce6 at 660 nm.

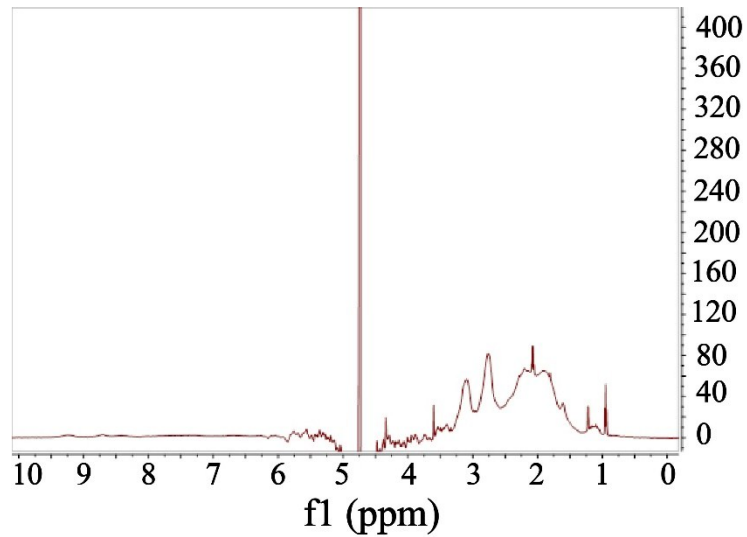


Figure S6. ^1H NMR spectrum of the $\text{Fe}_3\text{O}_4\text{-PEG-G5-MMP2@Ce6}$ nanoprobe.

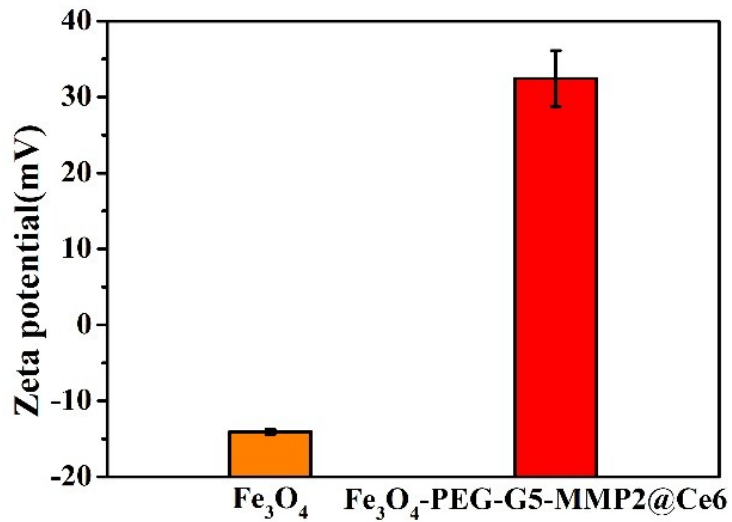


Figure S7. Zeta potential of the Fe_3O_4 NPs and $\text{Fe}_3\text{O}_4\text{-PEG-G5-MMP2@Ce6}$ nanoprobe.

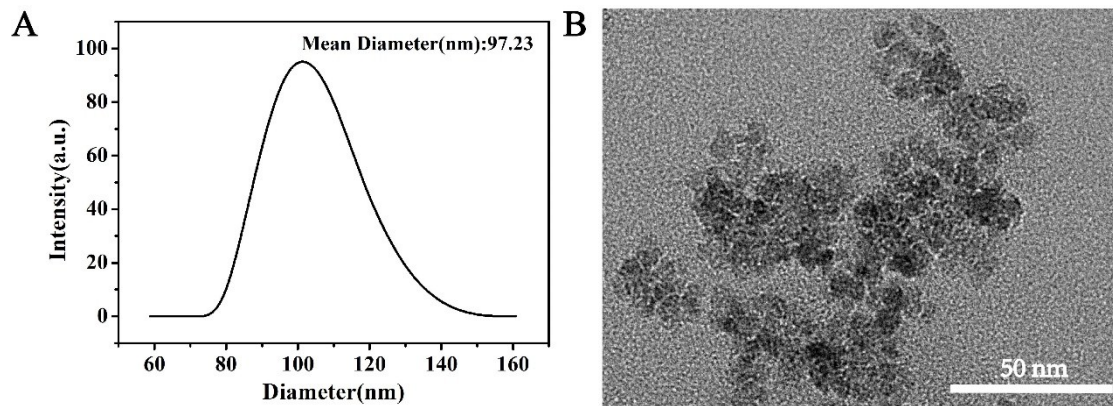


Figure S8. (A) DLS measurement of $\text{Fe}_3\text{O}_4\text{-PEG-G5-MMP2@Ce6}$ nanoprobe in aqueous solution after 2 weeks of placement. PDI=0.264. (B) TEM image of Fe_3O_4 -

PEG-G5-MMP2@Ce6 nanoprobes after 2 weeks of placement.

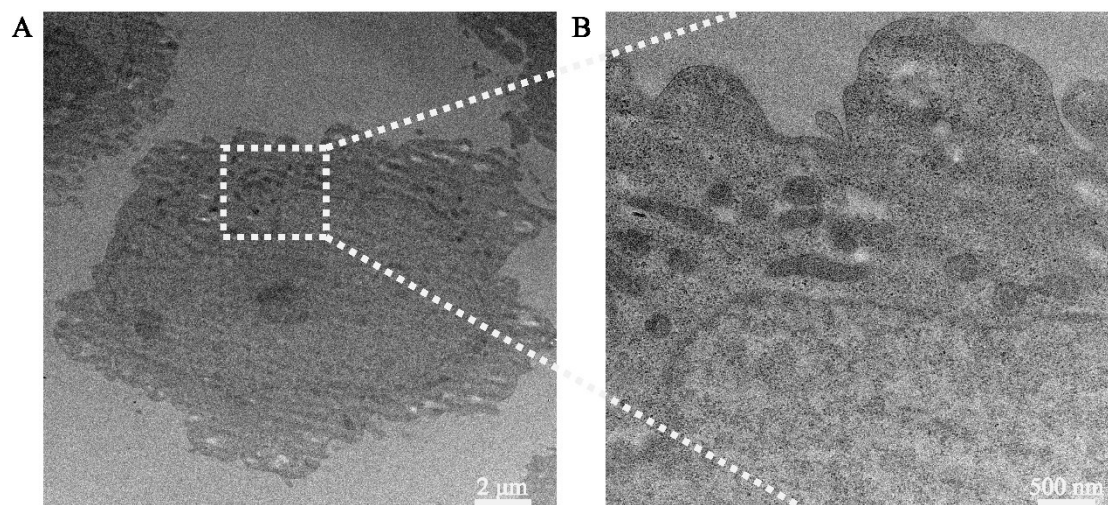


Figure S9. TEM images of MGC-803 cells treated without Fe_3O_4 -PEG-G5-MMP2@Ce6 nanoprobes.

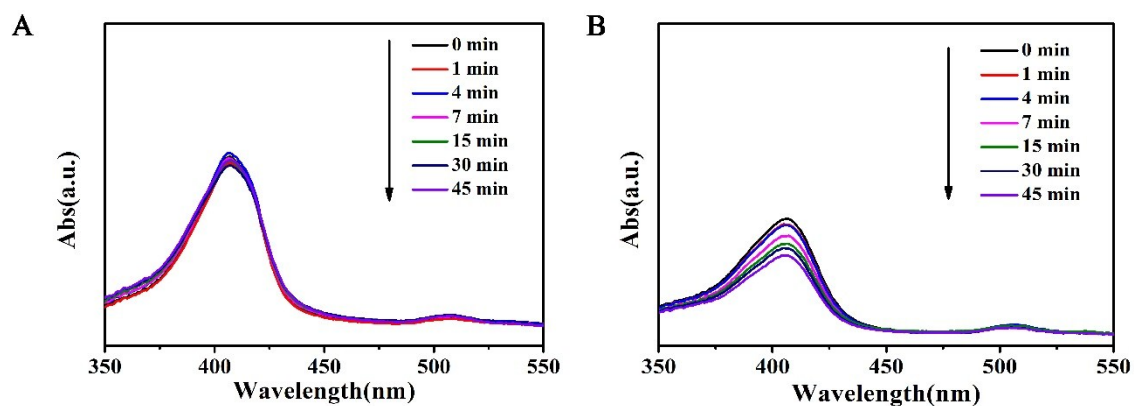


Figure S10. (A) The UV-vis absorption spectroscopy of Ce6 under laser irradiation. (B) The UV-vis absorption spectroscopy of Fe_3O_4 -PEG-G5-MMP2@Ce6 nanoprobes under laser irradiation.

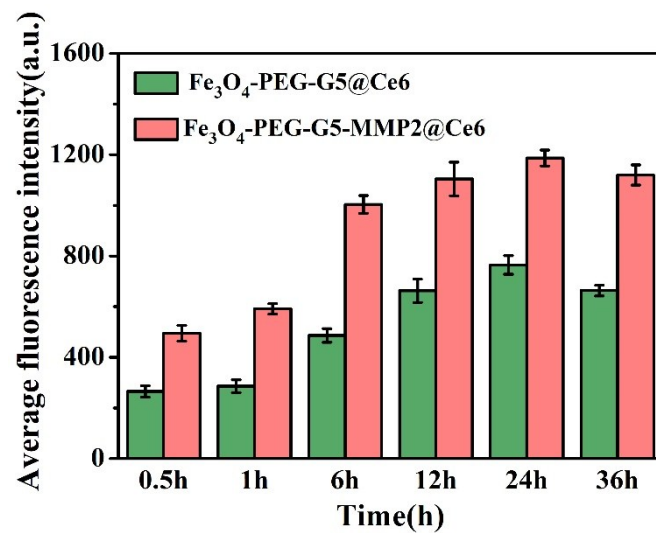


Figure S11. Quantitative analysis of average fluorescence intensity of tumor sites at different time points after injection of $\text{Fe}_3\text{O}_4\text{-PEG-G5@Ce6}$ nanoprobe and $\text{Fe}_3\text{O}_4\text{-PEG-G5-MMP2@Ce6}$ nanoprobe.

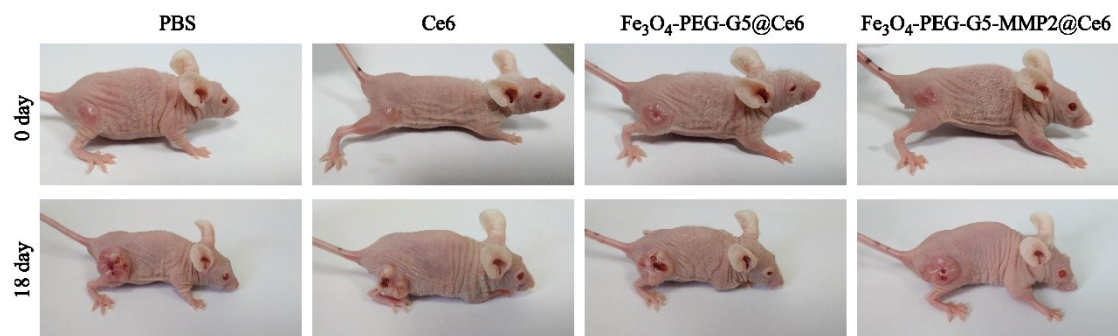


Figure S12. The pictures of tumor-bearing mice before and after intravenous injection of PBS, Ce6, $\text{Fe}_3\text{O}_4\text{-PEG-G5@Ce6}$ and $\text{Fe}_3\text{O}_4\text{-PEG-G5-MMP2@Ce6}$ nanoprobe.