

Electronic Supplementary Information (ESI)

Magnetically Controlled Release of Recombinant Tissue Plasminogen Activator from Chitosan Nanocomposites for Targeted Thrombolysis

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Experimental Section

Preparation of Fe_3O_4 magnetic nanoparticle (Fe_3O_4 MNP)

Fe_3O_4 MNP was obtained by reacting 4.75 g of $\text{FeCl}_3 \cdot 6\text{H}_2\text{O}$ and 1.75 g of $\text{FeCl}_2 \cdot 4\text{H}_2\text{O}$ in 80 ml of distilled deionized (DDI) water at 60 °C under N_2 by stirring at 400 rpm for 1 hour. Eight milliliters of 28% NH_4OH was added to the solution, after which the color of the mixture turned from yellow to black immediately, and the solution was stirred at 600 rpm for another 20 minutes. The synthesized Fe_3O_4 MNP was washed three times with DDI water by magnetic decantation, dialyzed (MWCO = 3500) against DDI water for 7 days with daily water change, and stored at 4 °C.

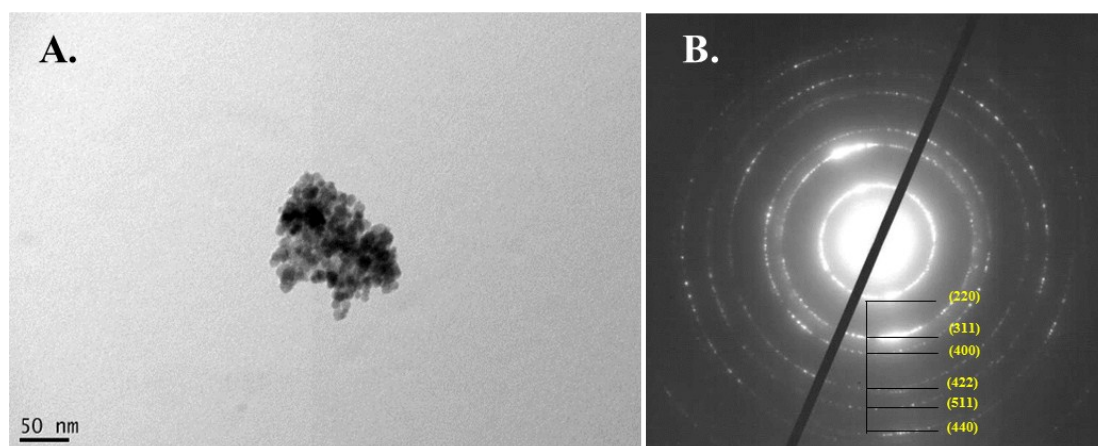


Figure S1. (A) Transmission electron microscope image (magnification = 500,000; bar = 50 nm) and (B) electron diffraction patterns of Fe_3O_4 magnetic nanoparticle (MNP).