

Fig.S1. FT-IR and ^1H -NMR spectra of thiolated DTPA. A) FT-IR spectrum of DTPA-SH vs bi-anhydride DTPA; B) ^1H -NMR in D_2O spectrum of DTPA-SH

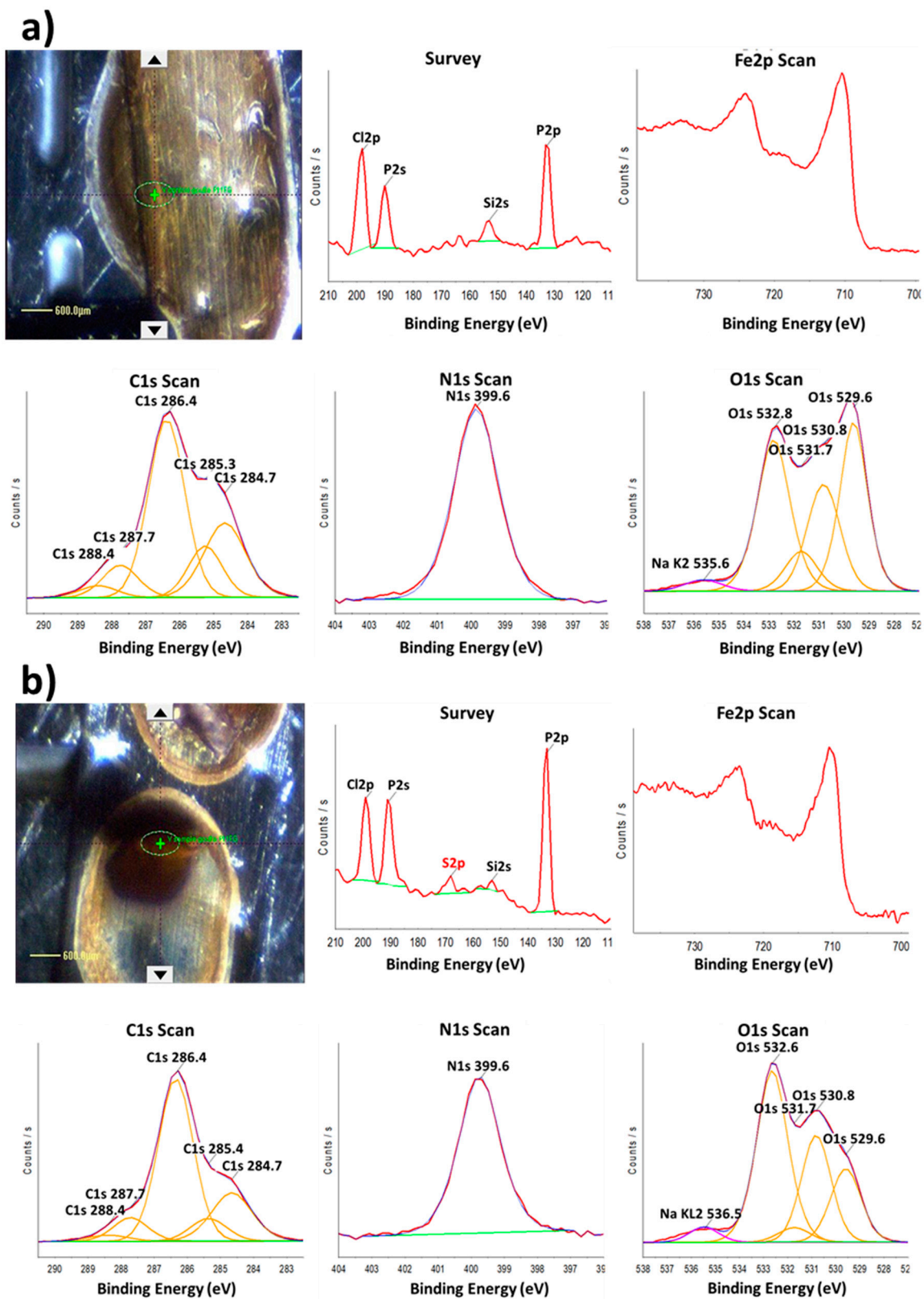


Fig.S2. Optical images of the analyzed area by XPS, part of survey focusing on S2p peak, Fe2p spectrum, and fitted C1s, O1s, N1s XPS spectra on NV-scFv (a) and NV-scFv-DTPA_{0.6} (b) sample drops.

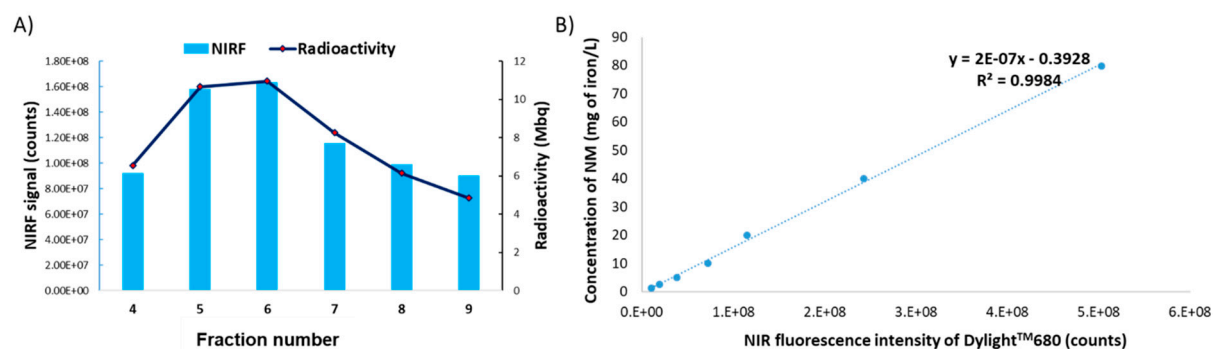


Fig.S3. A) Elution profiles of six fractions the most concentrated of NM-scFv-DTPA-¹¹¹In after PD-10 column purification according to their NIRF intensity (histogram) and their radioactivity (curve); B) Calibration range of NM-scFv-DTPA (mg of iron/L) according to the NIRF intensity of Dylight™680 used for the calculation of injected formulation (Dilution factor: 15 µL of NM-scFv-DTPA diluted in 35 µL of PBS 1X).