Supporting Information

Highly Soluble Multifunctional MnO Nanoparticles for Simultaneous Optical and MRI Imaging and Cancer Treatment using Photodynamic Therapy

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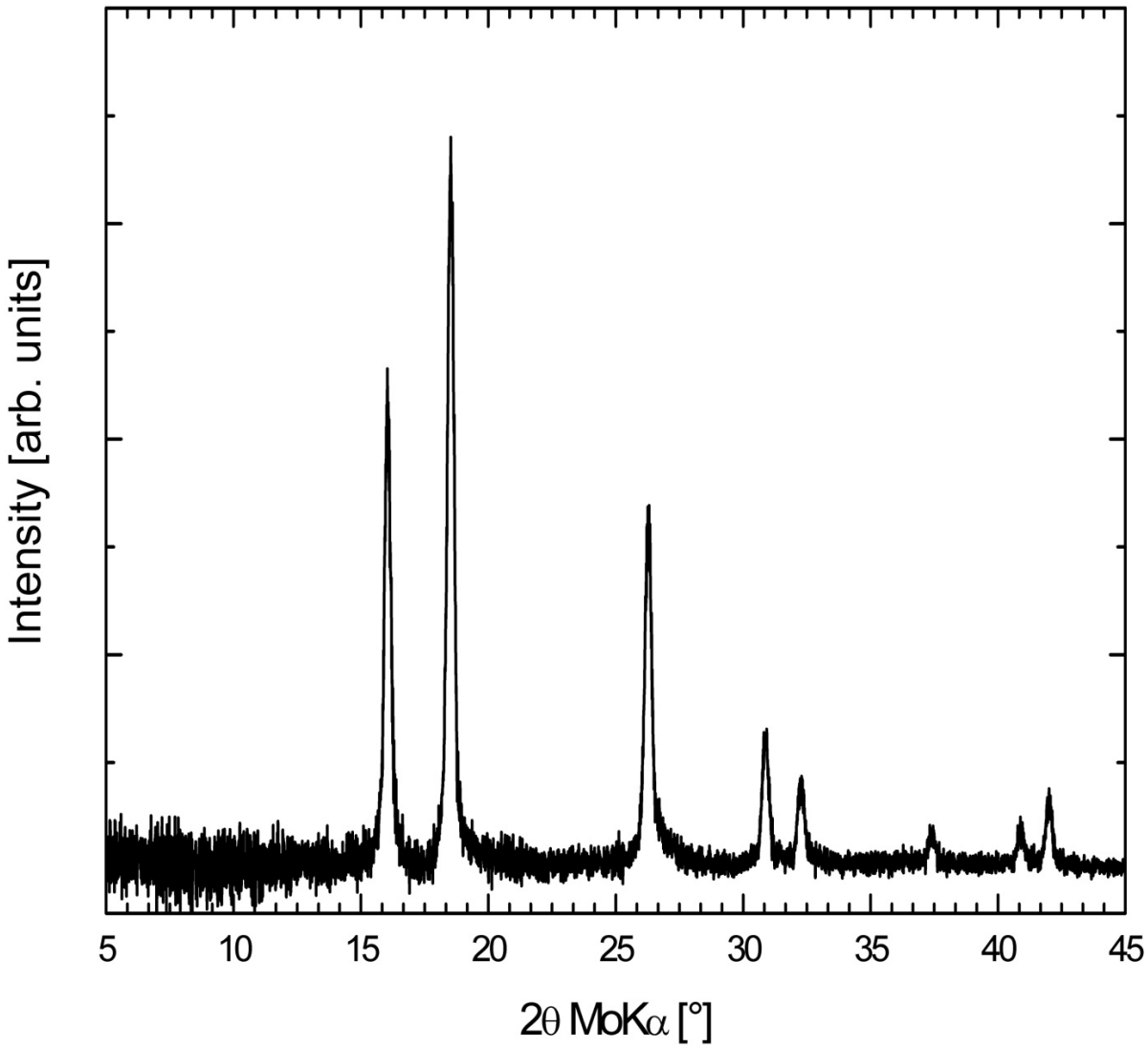

Fig. S1. Powder XRD-pattern of as-prepared MnO nanoparticles.

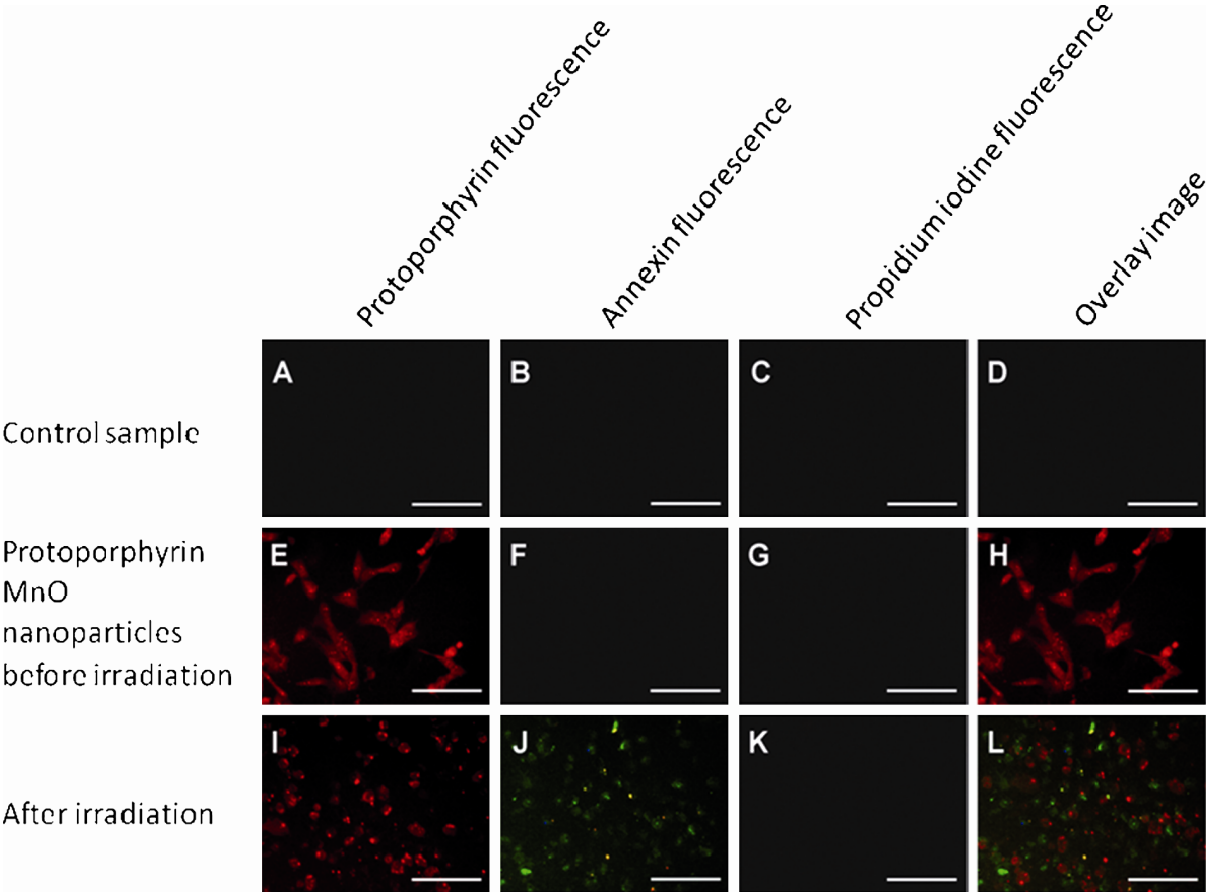

Fig. S2. Light microscopic images of human kidney cancer cells. (A-D) MnO nanoparticles functionalized with PEG as control. (A, E and I) Protoporphyrin-functionalized MnO nanoparticles (red fluorescence signal) and control sample, respectively, inside of the Caki-1 cells. (E) Caki-1 cells analyzed by the Nomarski light system before irradiation (I) subjected to fluorescence light microscopy analysis at an excitation wavelength of 410 nm, respectively. After photoactivation of the protoporphyrin-functionalized nanoparticles (I and L) the Nomarski light system shows cytoplasmic blebbing and condensation, cell shrinkage, and formation of apoptotic bodies (J). The presence of Annexin-V-FITC labeled (green fluorescence, J) confirms cell apoptosis. (Scale bar: 20 μm.) Absence of propidium iodine fluorescence (K) confirms cell apoptosis in favor of cell necrosis.