Supporting Information

ROS-responsive EPO nanoparticle ameliorates ionizing radiation-induced hematopoietic injury

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Characterizations

Table S1 Molecular weight of Polymer

Polymer	Mw	Mn	PDI
2s-PLGA	9795	15424	1.57
3s-PLGA	12660	17660	1.39

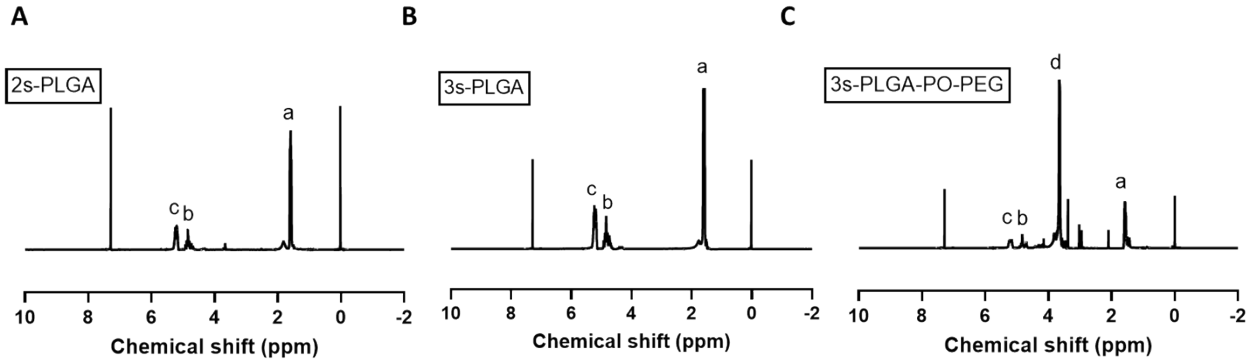

Figure S1. ^{1}H-NMR spectra of 2s-PLGAa(A), 3s-PLGA(B) and 3s-PLGA-PO-PEG(C).

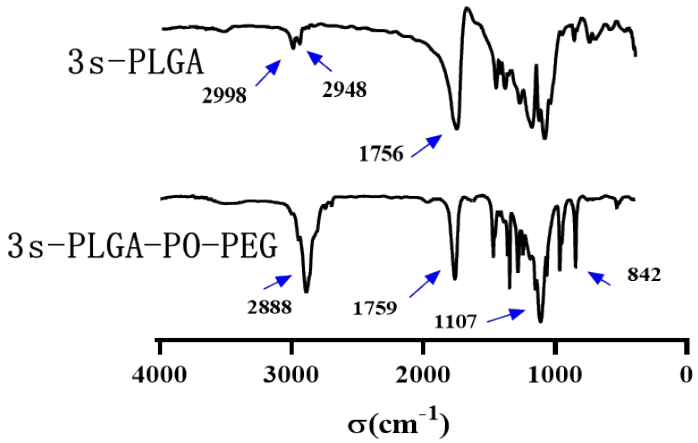

Figure S2. FT-IR spectra of 3s-PLGA and 3s-PLGA-PO-PEG.

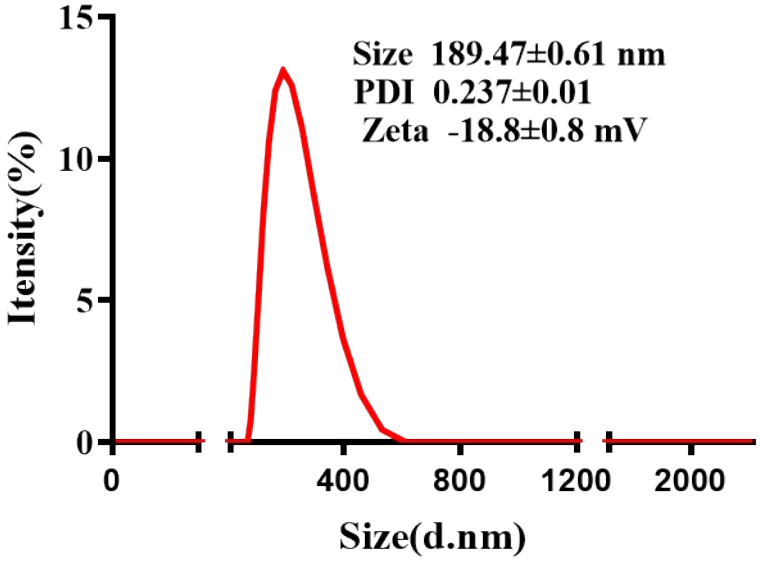

Figure S3. Particle size distribution of PLGA-PEG NPs.

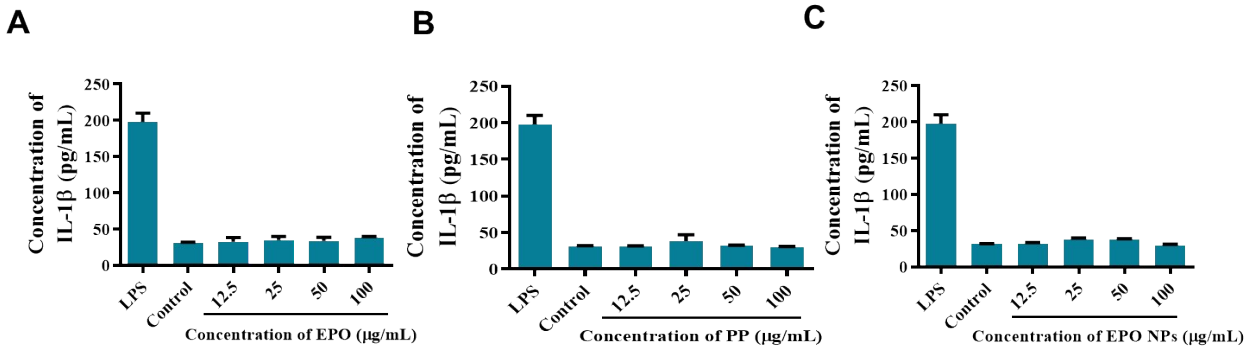

Figure S4. Inflammatory response of EPO (A), PLGA-PO-PEG (B), EPO NPs(C) in RAW264.7 inducing interleukin-1β (IL-1β). Bars shown were mean ± SD (n=3).

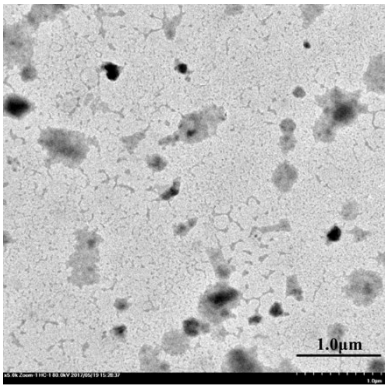

Figure S5. TEM image of EPO NPs in H_2O_2 solution.

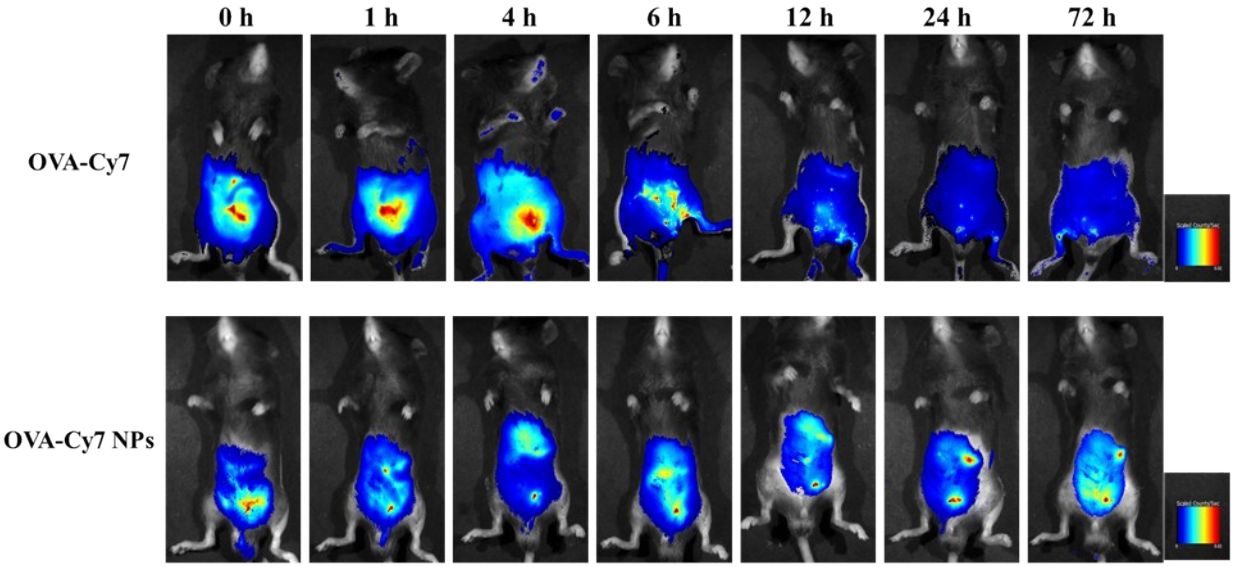

Figure S6. Imaging in vivo and Biodistribution Study.

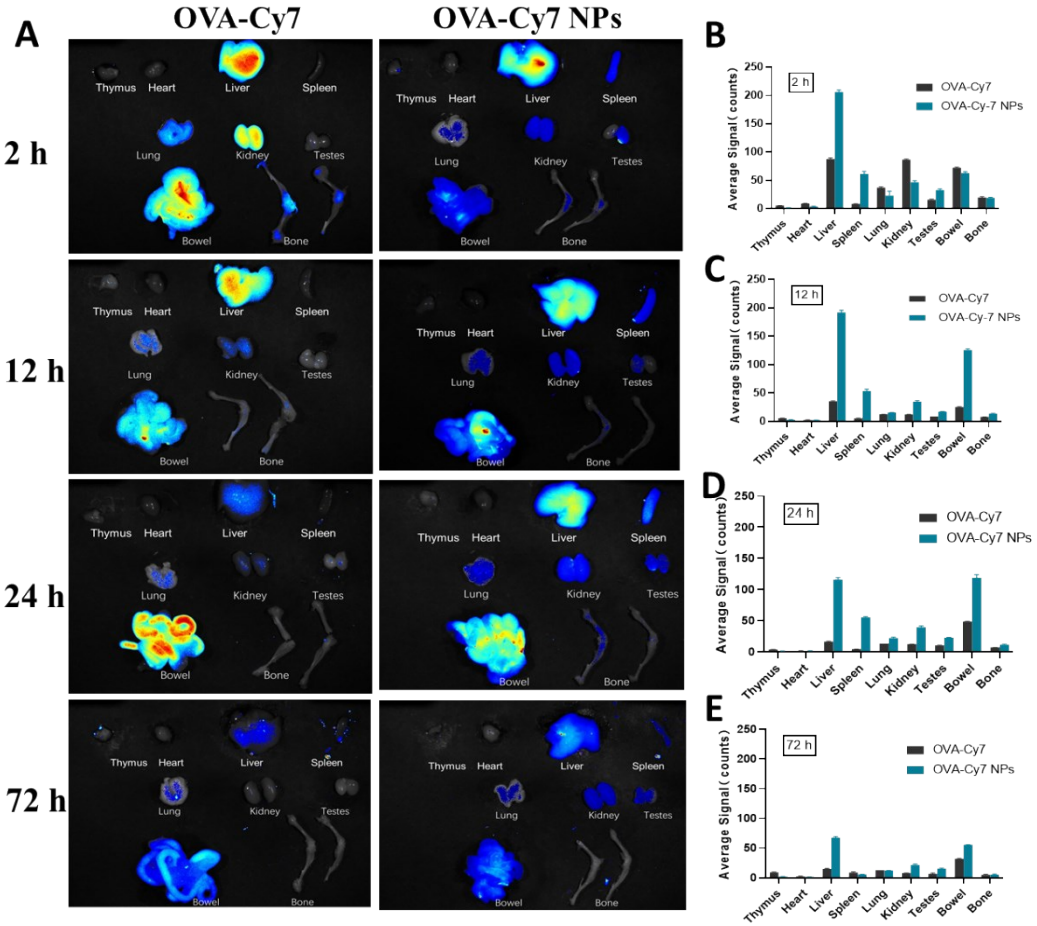

Figure S7. Biodistribution of free drug and nanoparticles in mice.

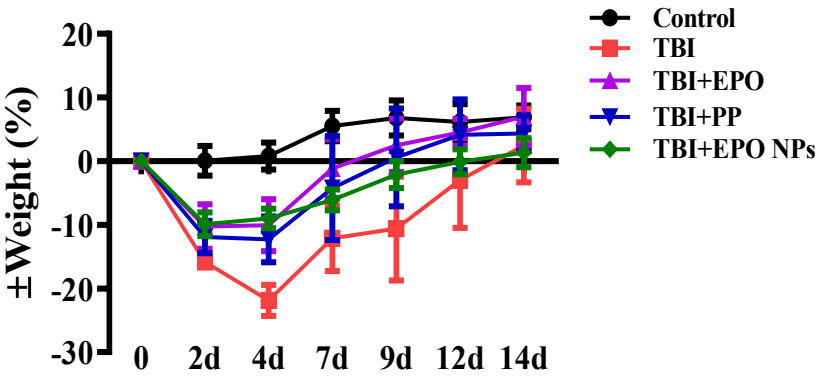

Figure S8. In vivo evaluation effect of EPO NPs on IR-induced loss of weight. Mice were treated with different preparations after 4Gy total body irradiation (TBI) and up to 14 days after TBI. Control mice were unirradiated. The weight change of individual mice was measured during the treatment period. Bars shown were mean ± SD (n=6).

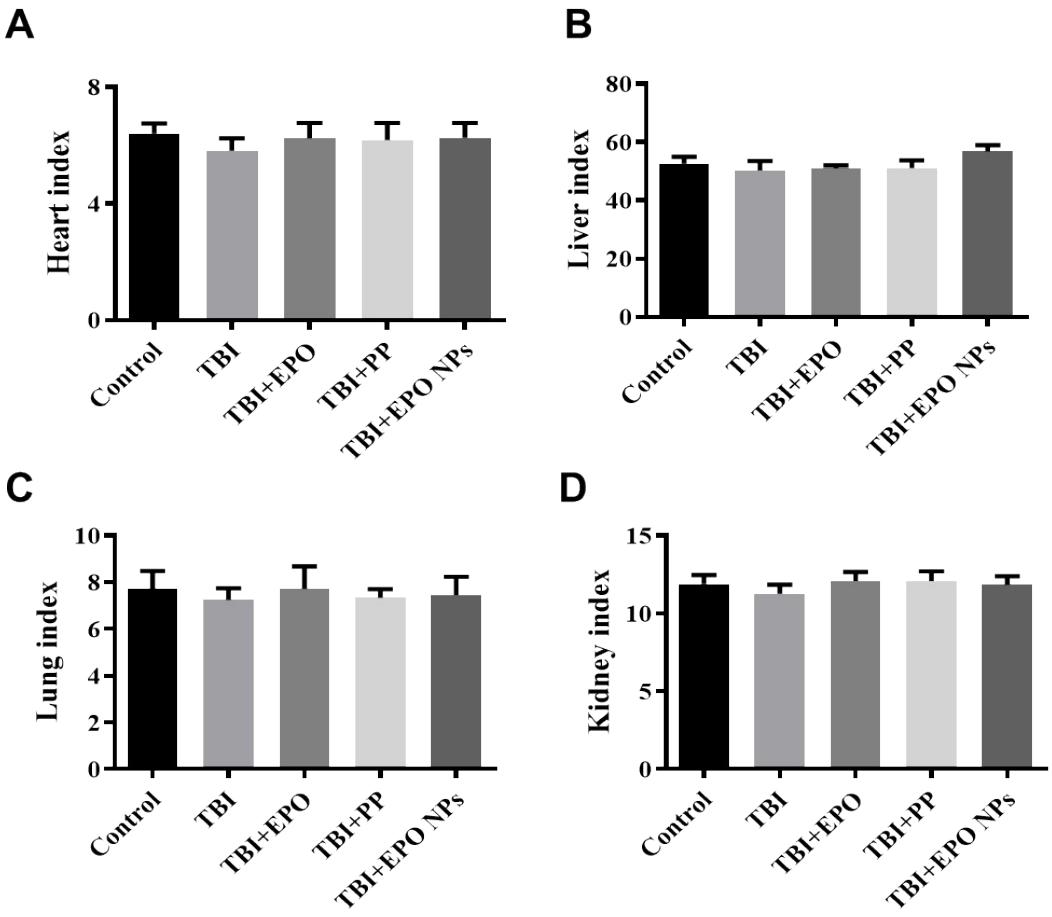

Figure S9. In vivo evaluation effect of EPO NPs on IR-induced multiple viscera degeneration. Heart index (A), liver index (B), lung index (C) and kidney index (D) of mice were calculated on the 14th day after exposure to TBI. Bars shown were mean ± SD (n=5-6).

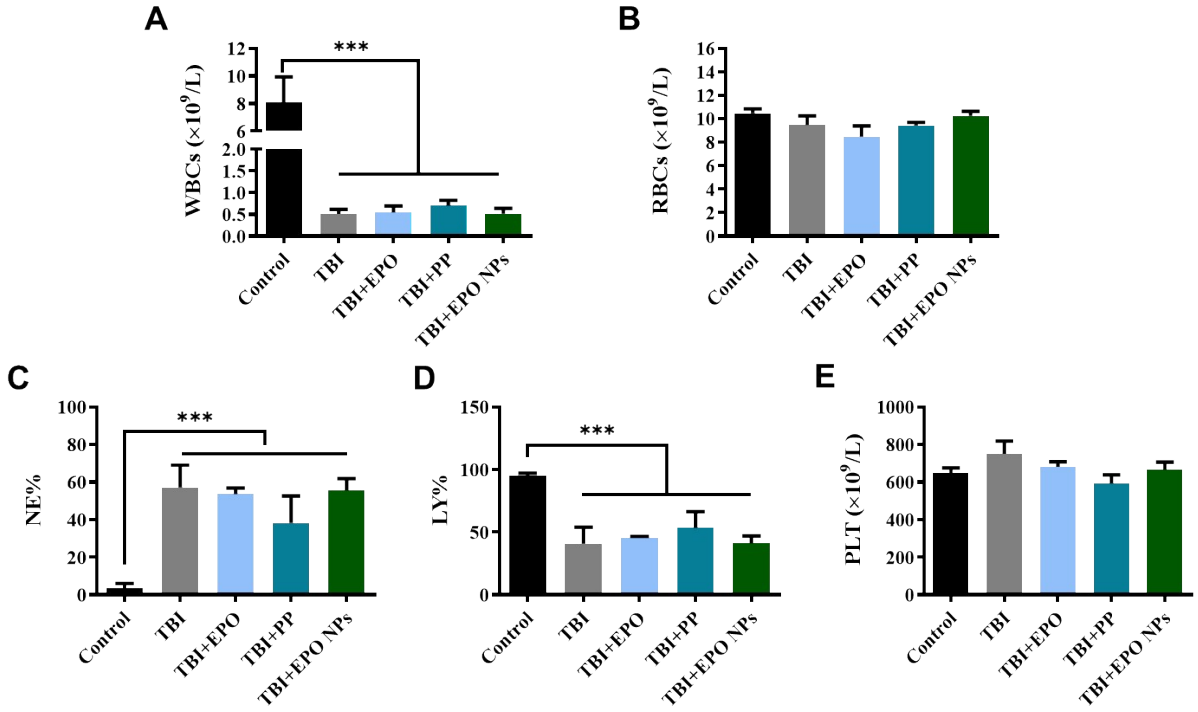

Figure S10. In vivo evaluation effect of EPO NPs on IR-induced peripheral blood cells changes. Mice were treated with different preparations. The number of white blood cells (WBCs) (A), red blood cells (RBCs) (B), neutrophil percentage (NE%) (C), lymphocyte percentage (LY%) (D), and PLT (E) in peripheral blood were quantified at 1 days after exposure to 4Gy TBI. Bars shown were mean ± SD (n=4). The statistical significance in difference was analyzed using a student's T-Test: *P < 0.05, **P < 0.01 and ***P < 0.001.