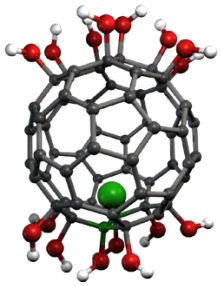

Figure S1. Theoretical structure of single Gd@$C_{82}(OH)_{22}$ molecule.

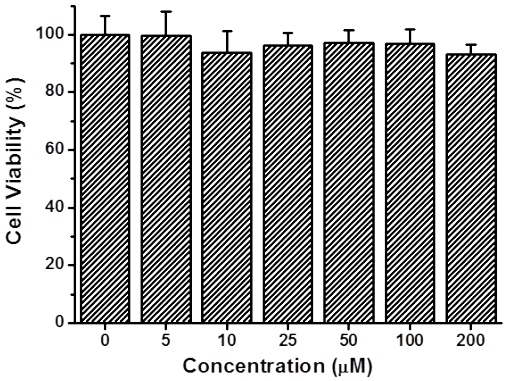

Figure S2. The toxicity of Gd@$C_{82}(OH)_{22}$ to the NIH-3T3 fibroblast cells. NIH-3T3 cells were treated with different concentrations of Gd@$C_{82}(OH)_{22}$ nanoparticles for 24 h and analyzed by CCK-8 assays.

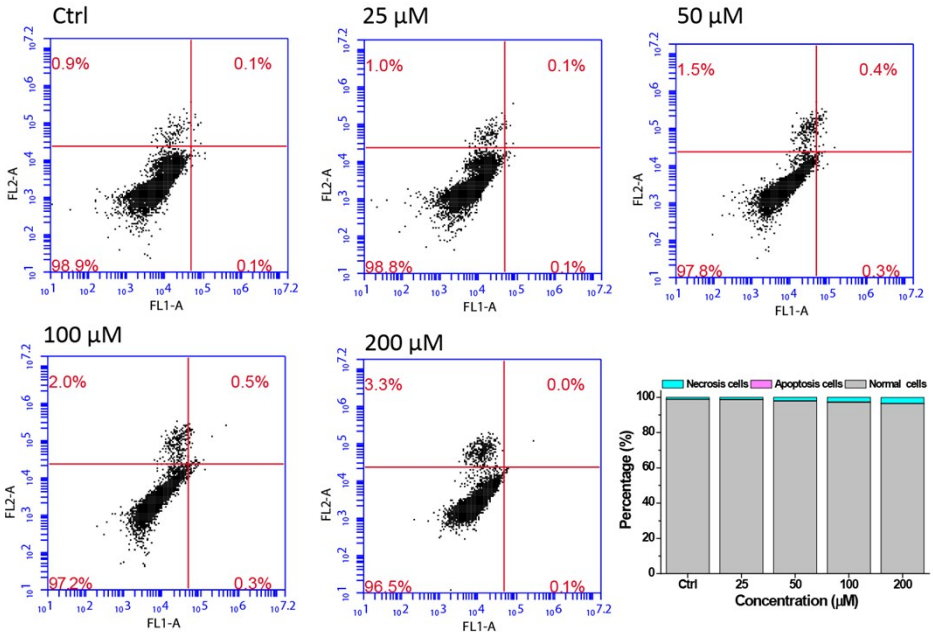

Figure S3. Cell apoptosis and necrosis analysis of NIH-3T3 cells after different concentrations of Gd-metallofullerenol nanoparticles treatment. NIH-3T3 cells were seeded into 6-well plates for 24 h with a density of 5 × 10^4. When cells grew to 70% confluence, they were treated with different concentrations of Gd-metallofullerenol nanoparticles for 24 h. Finally, NIH-3T3 cells were collected and examined to determine the percentages of apoptosis and necrosis cells.

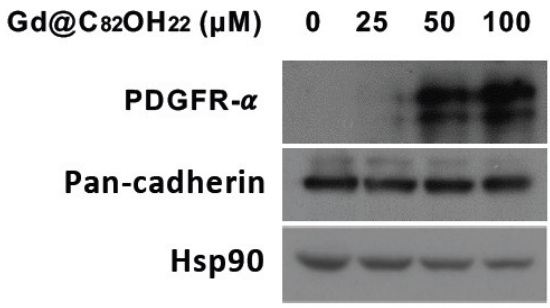

Figure S4. Dose effects of Gd-metallofullerenol nanoparticles on the accumulation of PDGFR-α in NIH-3T3 cells. NIH-3T3 cells were treated with different concentration of Gd-metallofullerenol nanoparticles for 48 h. The protein levels were determined by Western blot analysis.

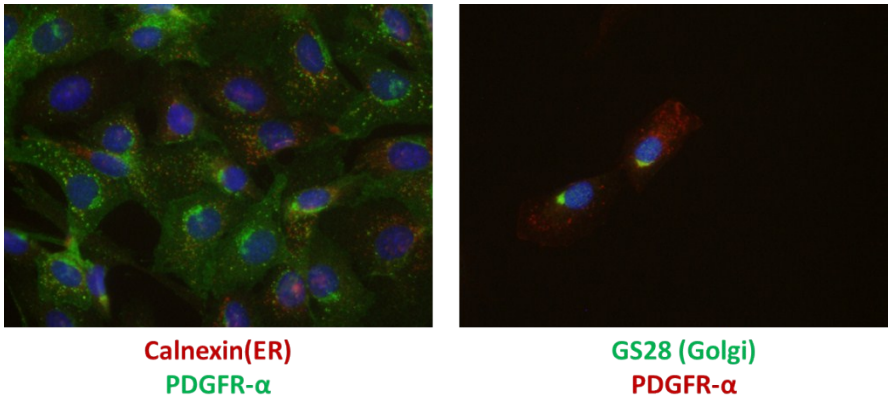

Figure S5. Intracellular co-localization of PDGFR-α with endoplasmic reticulum (left) and Glogi complex (right) after Gd@$C_{82}(OH)_{22}$ treatment.

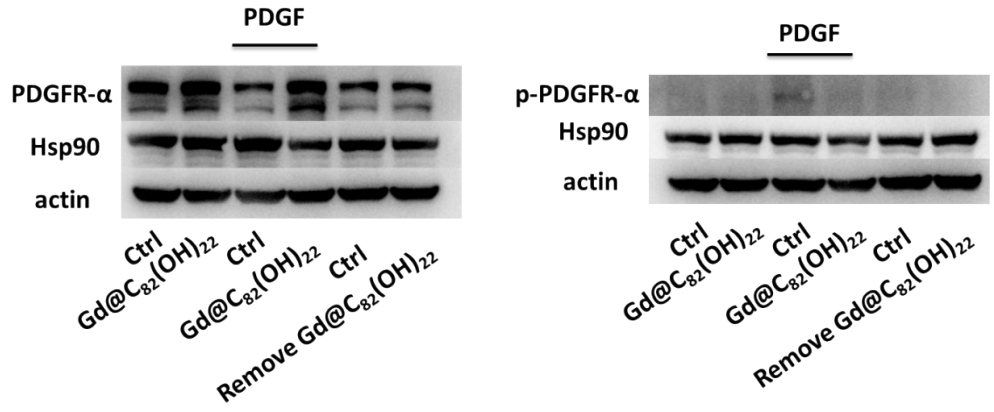

Figure S6. Western blot analysis of PDGFR-α expression and its phosphorylation with or without Gd@$C_{82}(OH)_{22}$ and withdraw adverse. NIH-3T3 fibroblast cells were pretreated with or without Gd@$C_{82}(OH)_{22}$ nanoparticles for 24 h and then treated with PDGF for 20 min. For the withdraw adverse assay, cells were treat with Gd@$C_{82}(OH)_{22}$ nanoparticles for 24 h and then refresh the medium for another 12 h.