Electronic Supplementary Material (ESI) for Biomaterials Science.


# Supporting Information

## Polyethyleneimine coated $Fe_3O_4$ magnetic nanopaticles induce autophagy, NF-κB and TGF-β signaling pathways activation in HeLa cervical carcinoma cells via reactive oxygen species generation

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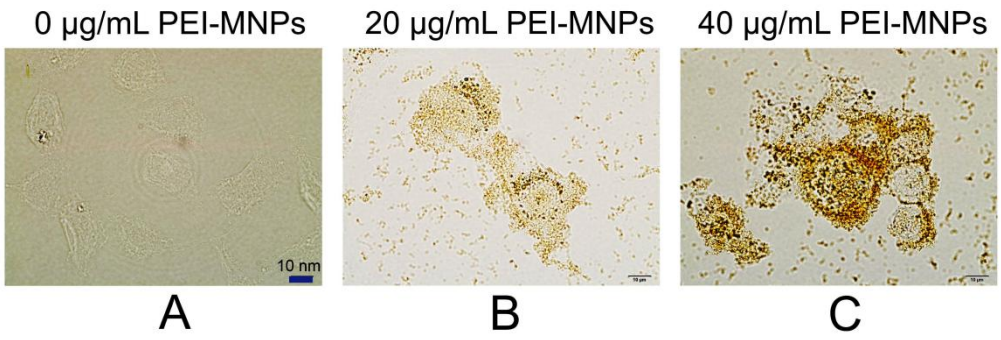


Figure S-1. The uptake of PEI-MNPs of HeLa cells after 24 h treatment.

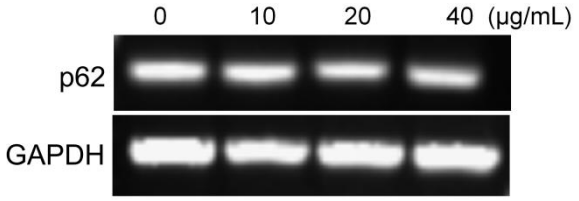


Figure S-2: RT-PCR (reverse transcription polymerase chain reaction) experiment to investigate p62 mRNA level in HeLa cells. The cells were treated with PEI-MNPs for 24 h.

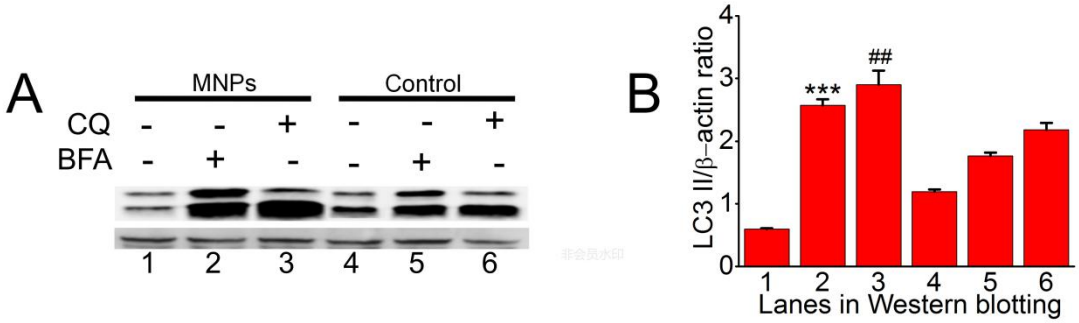


Figure S-3. Results of Western blotting experiments for treatment with different combinations in HeLa cells. A and B: Western blotting results of bafilomycin clamp experiment and quantitive presentation respectively. PEI-MNPs and CQ were used as 15 μg/mL, 20 μM for 24 h. BAF was used at 200 nM for 12 h. Lane 2 *vs*. 5, ***P < 0.005; lane 3 *vs*. 6, $^{\#\#}$P < 0.01.

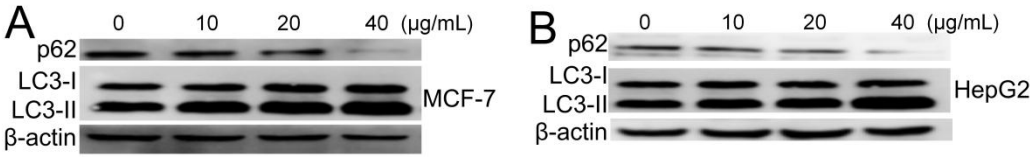


Figure S-4. Western blotting experiments to reveal p62 and LC3 abundance in cancer cells after PEI-MNPs treatment for 24 h. A: Western blotting results for MCF-7cells. B: Western blotting results for HepG2 cells.

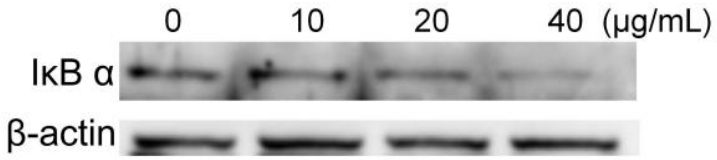


Figure S-5. Western blotting experiments to reveal IKBα abundance in HeLa cells after PEI-MNPs treatment for 24 h.

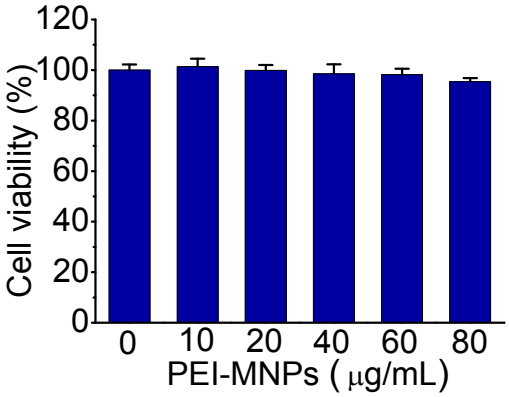


Figure S-6. MTT assay to evaluate the cell viability of HeLa cells treated with different concentrations of PEI-MNPs for 24 h.