Electronic Supplementary Material (ESI) for Biomaterials Science.

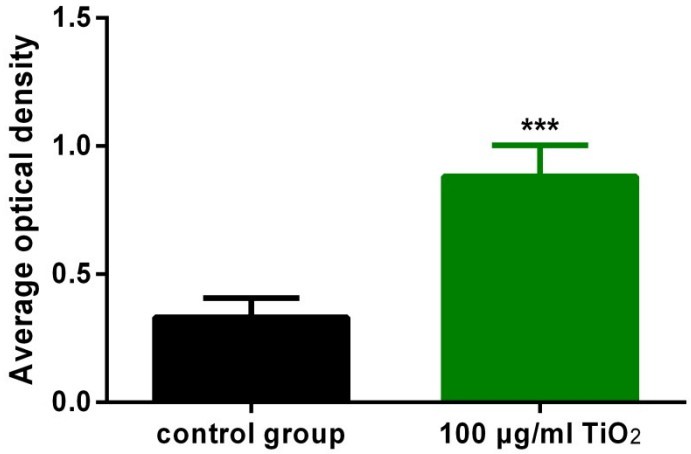

Figure S1: Fluorescent semi-quantitative analysis of autophagy levels after cells were exposed to TiO_2 NPs, *** means $p < 0.001$.

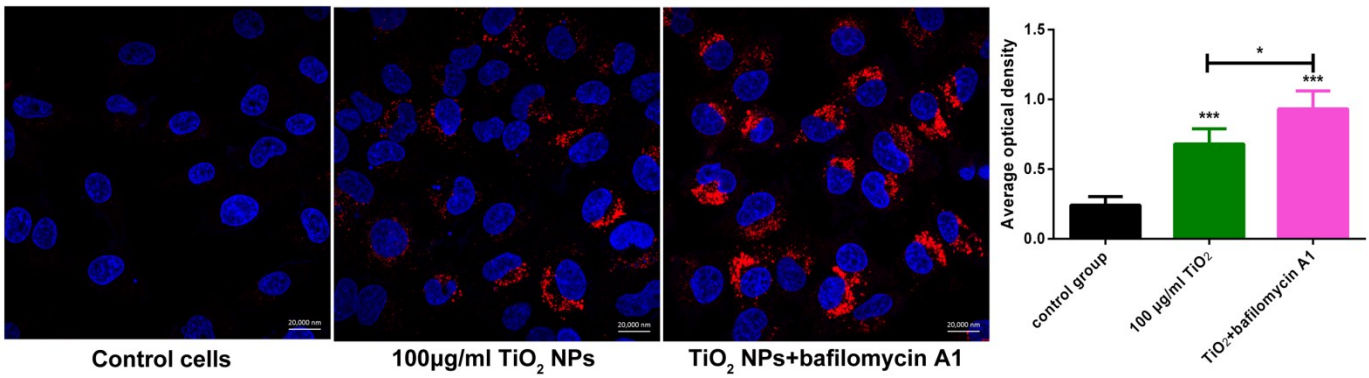

Figure S2: Immunofluorescence and semi-quantitative analysis of autophagy levels after cells were treated with TiO_2 NPs and bafilomycin A1, cell nuclear was stained blue with DAPI, autophagosome was stained red with CY3-conjuncted antibody, *means $p < 0.05$, ***means $p < 0.001$.

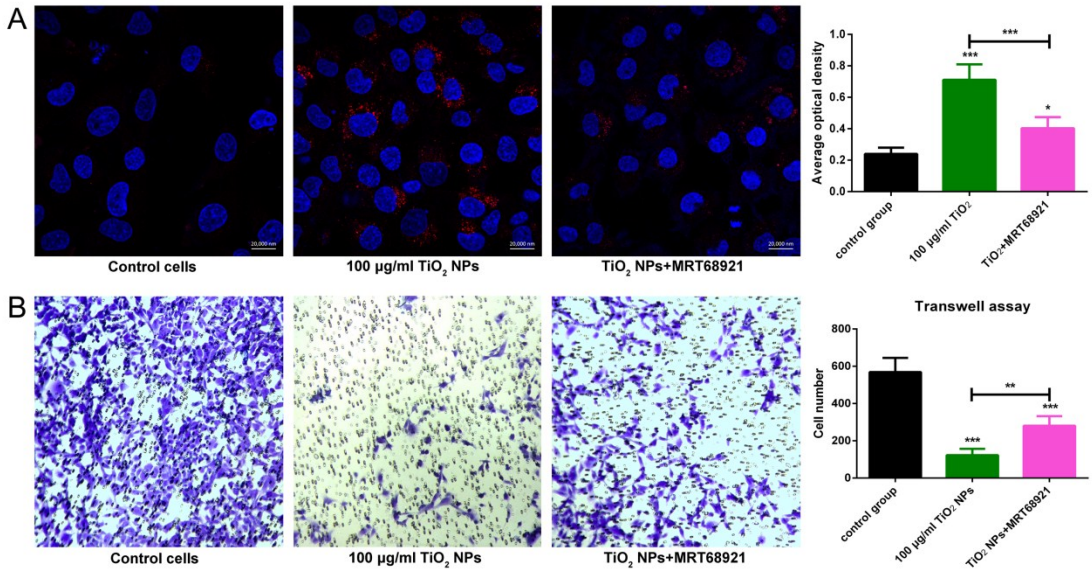

Figure S3: (A) Immunofluorescence and semi-quantitative analysis of autophagy levels after cells were treated with TiO_2 NPs and rapamycin. (B) Cell migration ability was evaluated with transwell assay and the penetrated cells were counted from four independent fields, data was presented as mean ± SE. * means $p < 0.05$, ** means $p < 0.01$, *** means $p < 0.001$.

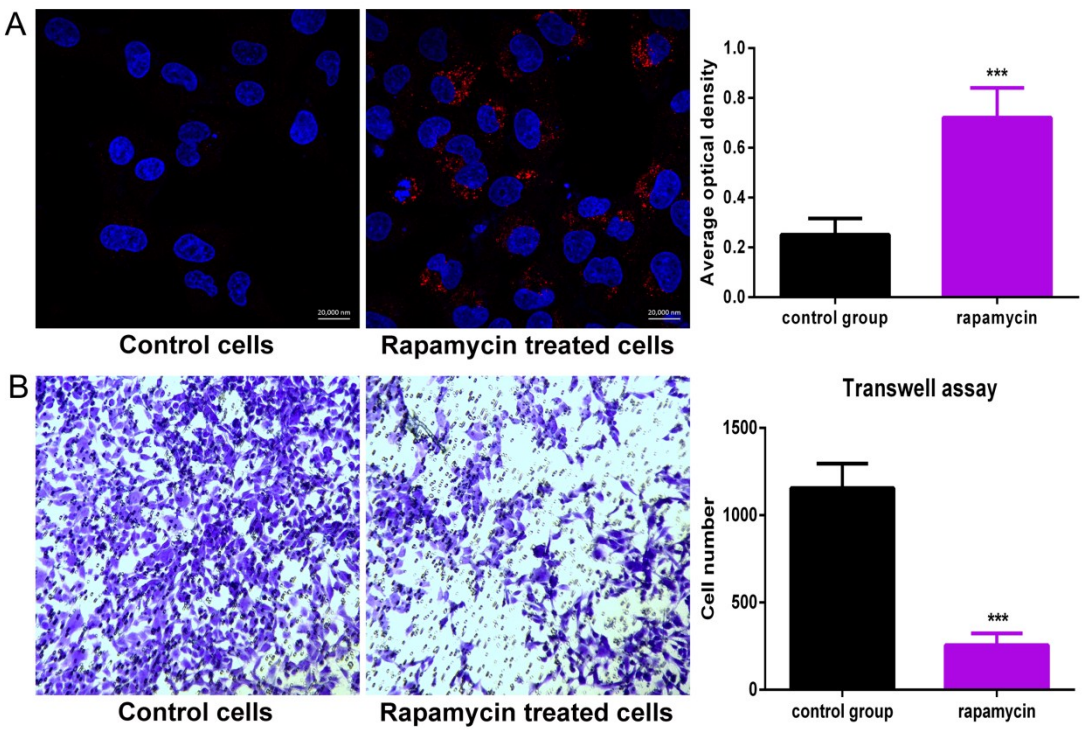

Figure S4: (A) Autophagy levels were assessed by immunofluorescence and semi-quantitative analysis of after cells were treated. (B) Cell migration ability was evaluated with transwell assay and cell numbers were counted from four independent fields, data was presented as mean ± SE. ***means $p < 0.001$.

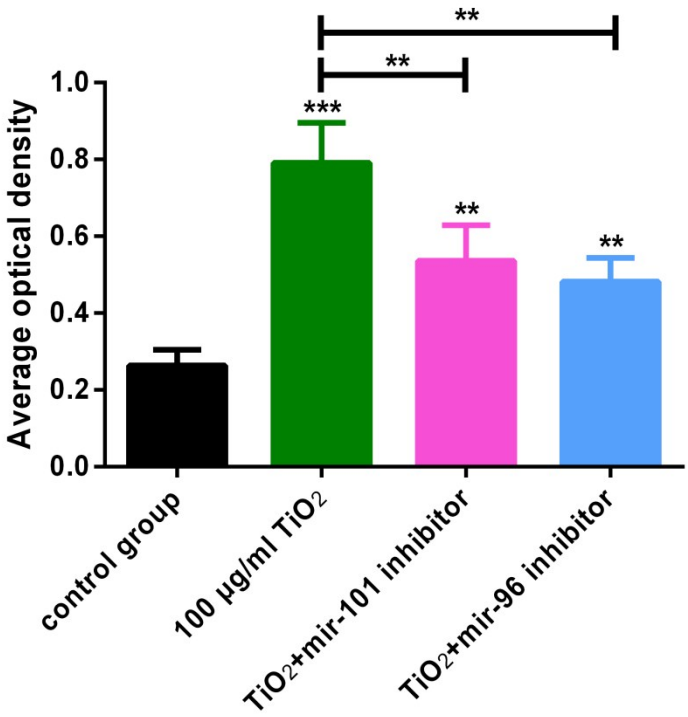

Figure S5: Fluorescent semi-quantitative analysis of autophagy levels after cells were treated with TiO_2 NPs and reversed with two microRNA inhibitor separately, ** means $p < 0.01$, *** means $p < 0.001$.

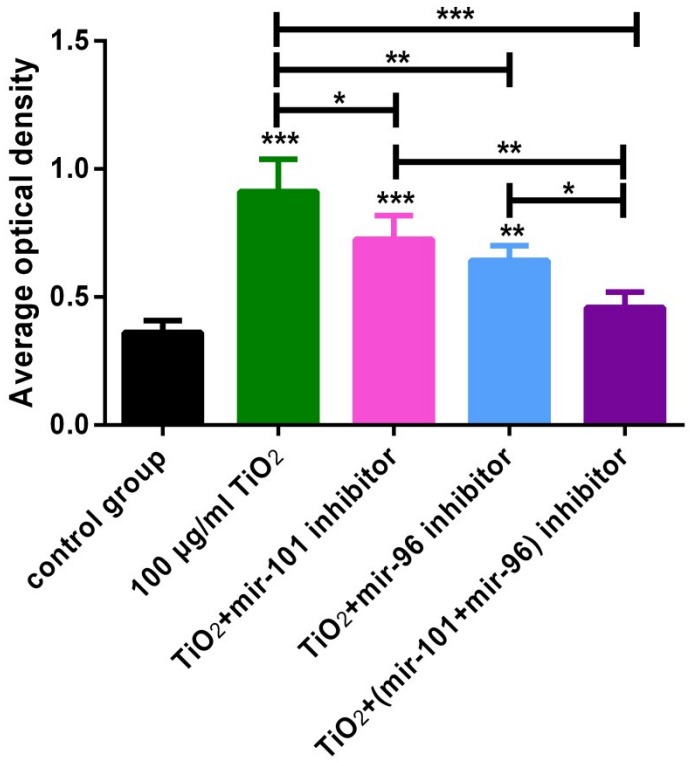

Figure S6: Fluorescent semi-quantitative analysis of autophagy levels after cells were treated with TiO_2 NPs and reversed with microRNA inhibitors, * means $p < 0.05$, ** means $p < 0.01$, *** means $p < 0.001$.