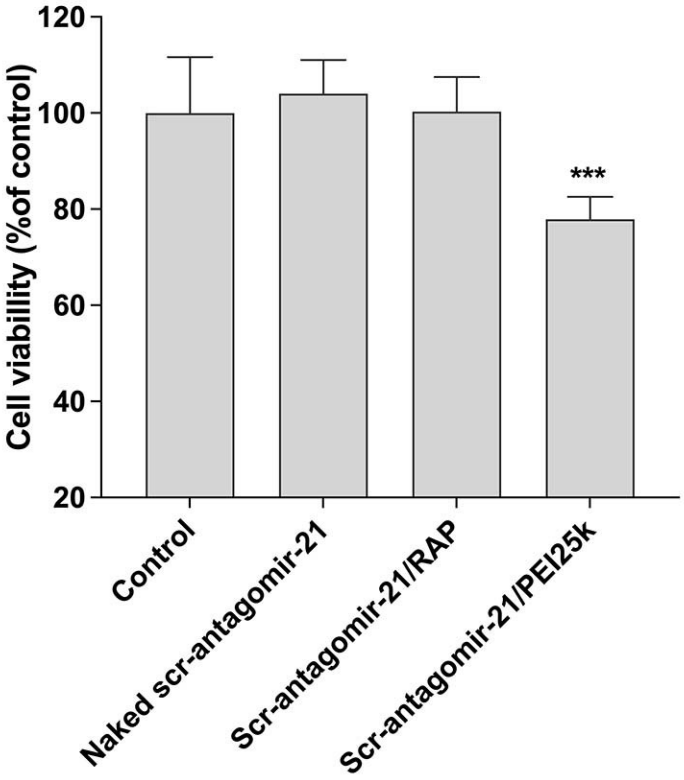

Supplementary Fig. 1. Cytotoxicity to HEK293 cells.
HEK293 cells were seeded in a 96-well plate at a density of 1×10^4 cells/well and incubated in DMEM containing 10% FBS in a 5% CO_2 incubator at 37°C for 24 h. The scrambled-antagomir-21 (scr-antagomir-21)/RAP, scr-antagomir-21/PEI25k, antagomir-21/RAP, and antagomir-21/PEI25k nanoparticles were prepared at optimal weight ratios for intracellular delivery. The amount of scr-antagomir-21 was fixed at 0.1 μg/well. The cell culture media was replaced with fresh DMEM without FBS. The samples were added to the cells and incubated at 37°C for 4 h. After incubation, the media were replaced with fresh 10% FBS DMEM and incubated at 37°C for an additional 20 h. Ten micrograms of MTT in PBS were added to each well. The cells were incubated for an additional 4 h at 37°C. Media containing MTT was removed and 100 μl DMSO was added to the wells to dissolve the formazan crystals formed by live cells. The absorbance was measured at 570 nm using a microplate reader. Cell viability (%) was calculated according to the following equation: Cell viability (%) = [OD570(sample)/OD570(control)] × 100. ***P<0.001 as compared with the other samples.