Supplementary data



Figure S1. Characterization of EVs by Western blotting and TEM.

- A. Detection of β -actin, CD9, CD63, and CD81 expression in EVs by Western blot.
- B. Transmission electron microscopy analysis of the morphology of EVs (Arrows indicate EVs, Scale bars: 100 nm).



Figure S2. miRNA-67 loading efficiency of AS1411-EVs was determined by Q-PCR.







A. Colocalization analysis of let-7-Cy3 and early endosome marker EEA1 by confocal microscopy. MDA-MB-231 cells were incubated with AS1411-EVs-let-7-Cy3 for 30 minutes (top) or 60 minutes (bottom), and then the EEA1 was visualized by Immunofluorescence (Red fluorescent represented let-7-Cy3 and the green fluorescent represented EEA1).

B. Colocalization analysis of let-7 and early endosome marker RAB5 by confocal microscopy. MDA-MB-231 cells were incubated with AS1411-EVs-let-7 for 30 minutes or 60 minutes, and then the Rab5 was visualized by Immunofluorescence (Red fluorescent represented let-7-Cy3 and the green fluorescent represented RAB5. Scale bar = $20 \mu m$).



Figure S4. Quantification of Cys fluorescence signal level in different treatment groups by Image J software in figure3.C.