Electronic Supplementary Material (ESI) for Photochemical & Photobiological Sciences.

Supporting Information

Cancer targeting with biomolecules: A comparative study of photodynamic therapy efficacy using antibody or lectin conjugated phthalocyanine-PEG gold nanoparticles

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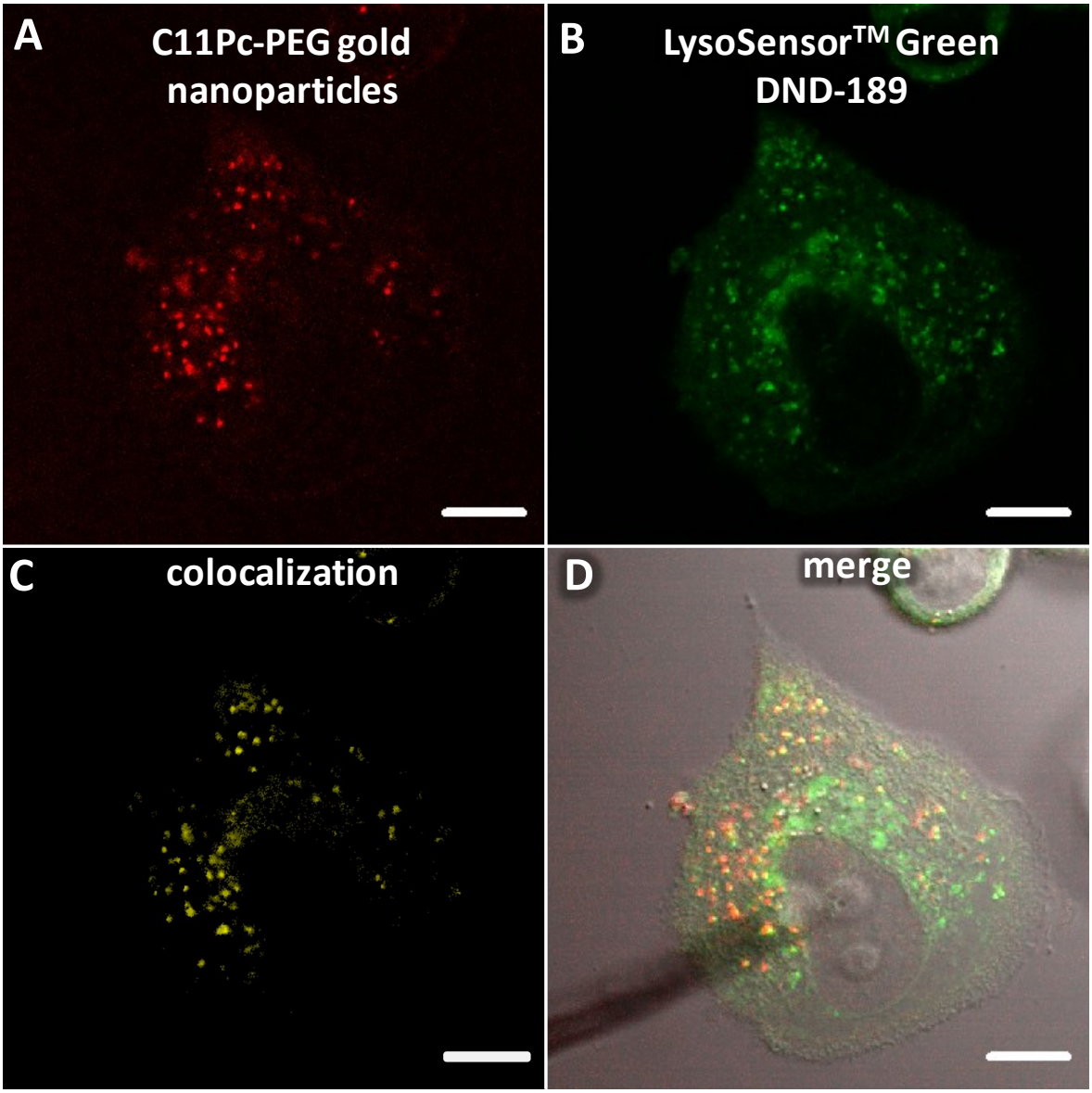

Figure S1 Confocal microscopy images of SK-BR-3 cells incubated with anti-HER-2 antibody conjugated C11Pc-PEG gold nanoparticles (1 µM C11Pc equivalent). (A) Excitation of the conjugated C11Pc-PEG gold nanoparticles at 633 nm results in red fluorescence emission. (B) Acidic organelles are visualised by the green fluorescence emission of LysoSensor™ Green DND-189 upon excitation at 458 nm. (C) Colocalisation of the conjugated C11Pc-PEG gold nanoparticles and the LysoSensor™ Green DND-189 is shown in yellow. (D) The DIC image and the fluorescence images of the C11Pc and the LysoSensor™ were merged. (Scale bars are 10 µm).

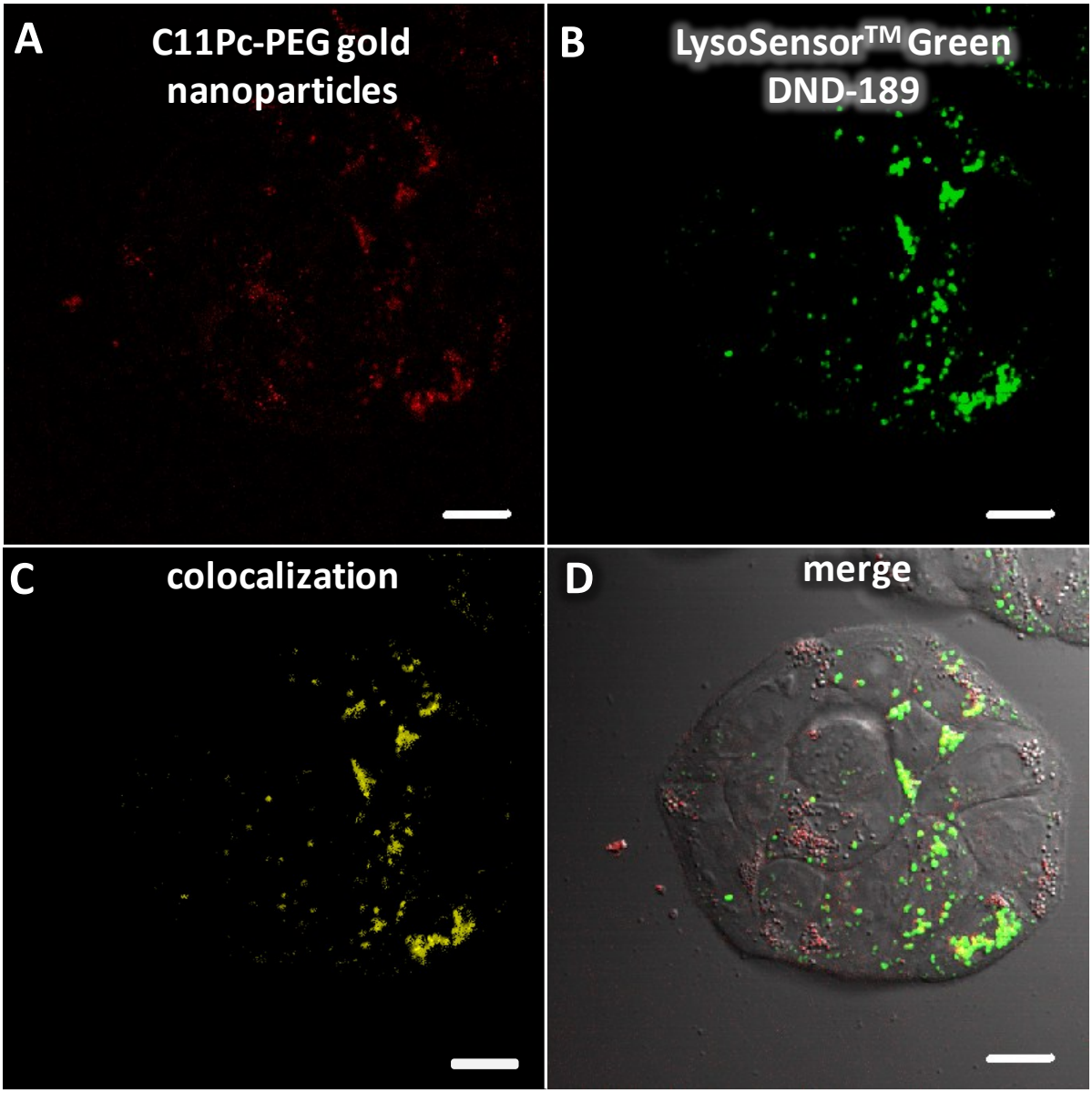

Figure S2 Confocal microscopy images of HT-29 cells incubated with the jacalin conjugated C11Pc-PEG gold nanoparticles (1 µM C11Pc equivalent). (A) Excitation at 633 nm resulted in a red fluorescence emission of the conjugated C11Pc-PEG gold nanoparticles. The contrast of the red channel was increased by 10% for clarity. (B) Acidic organelles were visualised by the green fluorescence emission of LysoSensor™ Green DND-189 upon excitation at 458 nm. The brightness of the green channel was reduced by 9% for clarity. (C) Colocalisation of the conjugated C11Pc-PEG gold nanoparticles and the LysoSensor™ Green DND-189 is shown in yellow. (D) The DIC image and the fluorescence images of the C11Pc and the LysoSensor™ were merged. (Scale bars are 10 µm).

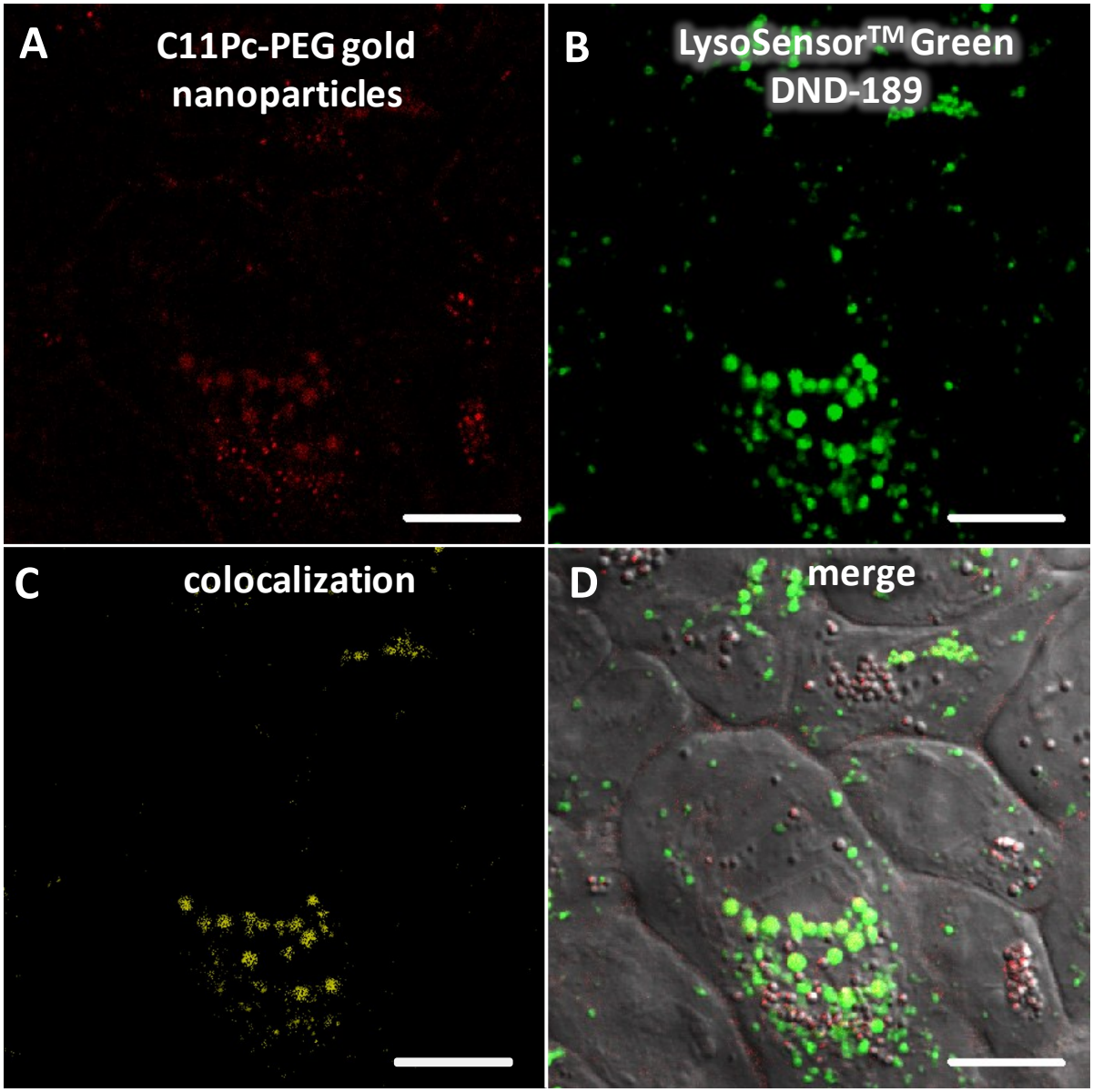

Figure S3 Confocal microscopy images of HT-29 cells incubated with: (A) anti-HER-2 antibody conjugated C11Pc-PEG gold nanoparticles (red fluorescence); and (B) LysoSensor™ Green DND-189 (green fluorescence). The contrast of the red channel was increased by 10% and the brightness of the green channel was reduced by 9% for clarity. (C) Colocalization of the nanoparticle conjugates with the LysoSensor™ Green DND-189 is shown in yellow. (D) The differential interference contrast image of the HT-29 cells merged with the fluorescence images of the nanoparticle conjugates and the LysoSensor™. (Scale bars are 10 µm).