



## Supplementary Materials

### **Folate-targeting quantum dots– $\beta$ –cyclodextrin nanocarrier for efficient delivery of unsymmetrical bisacridines to lung and prostate cancer cells**

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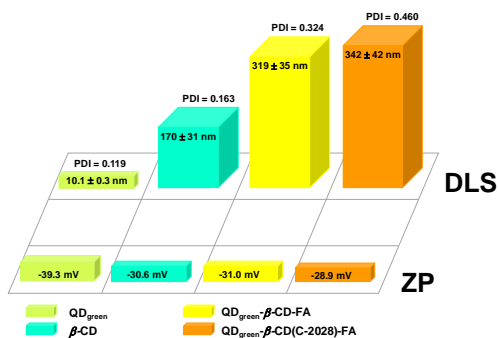
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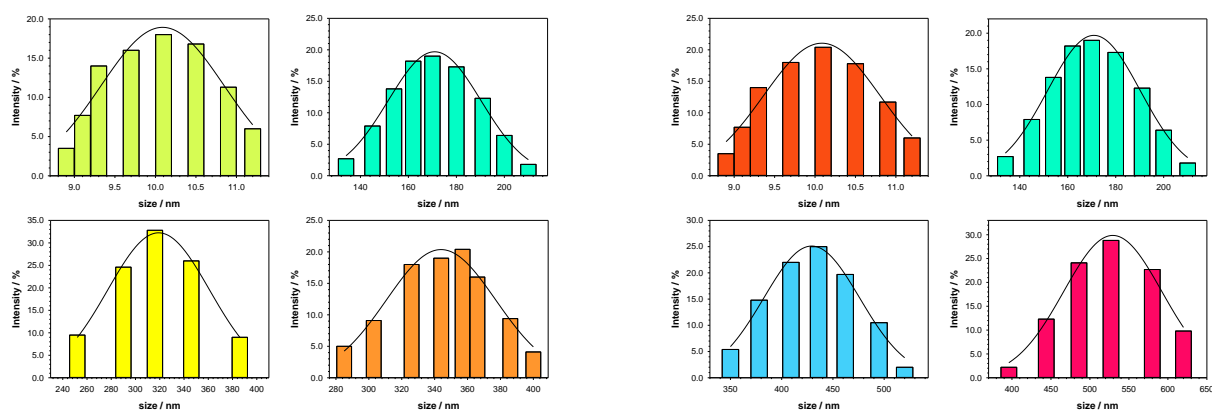
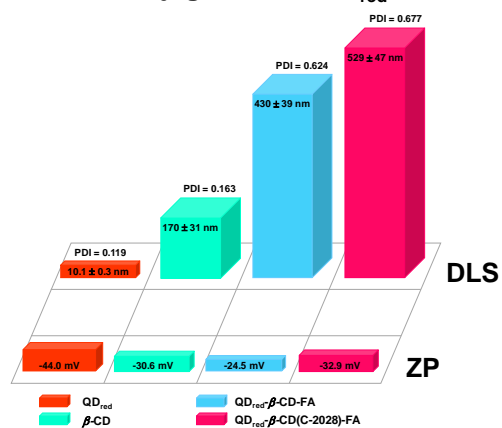
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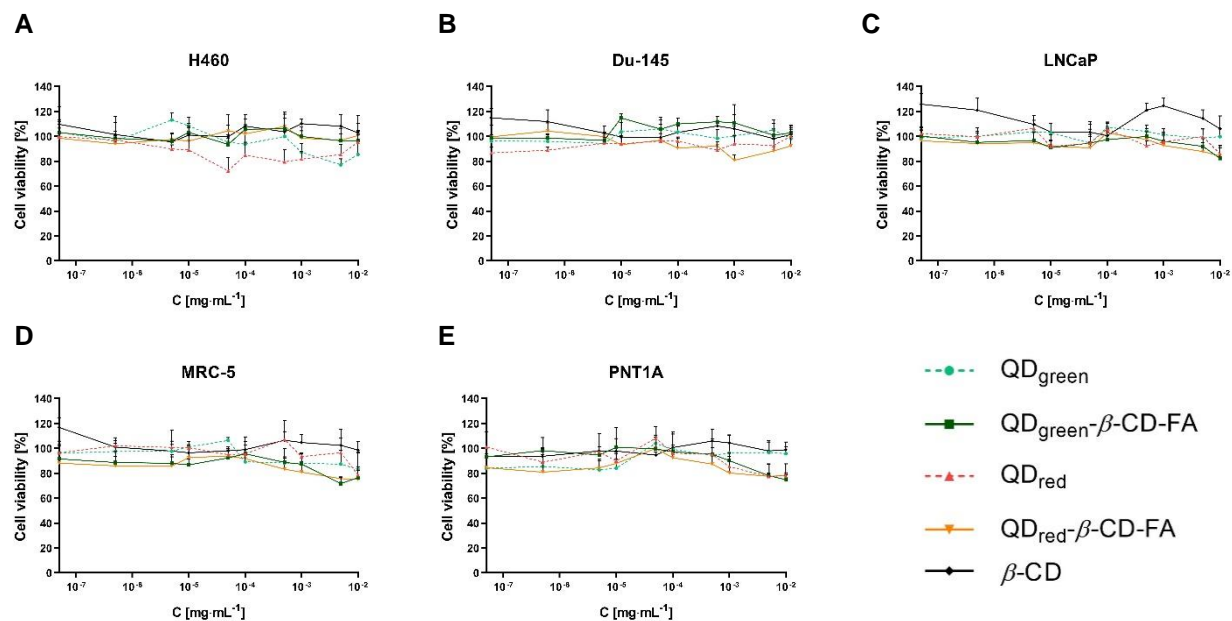
**A: nanoconjugates with QD<sub>green</sub>**



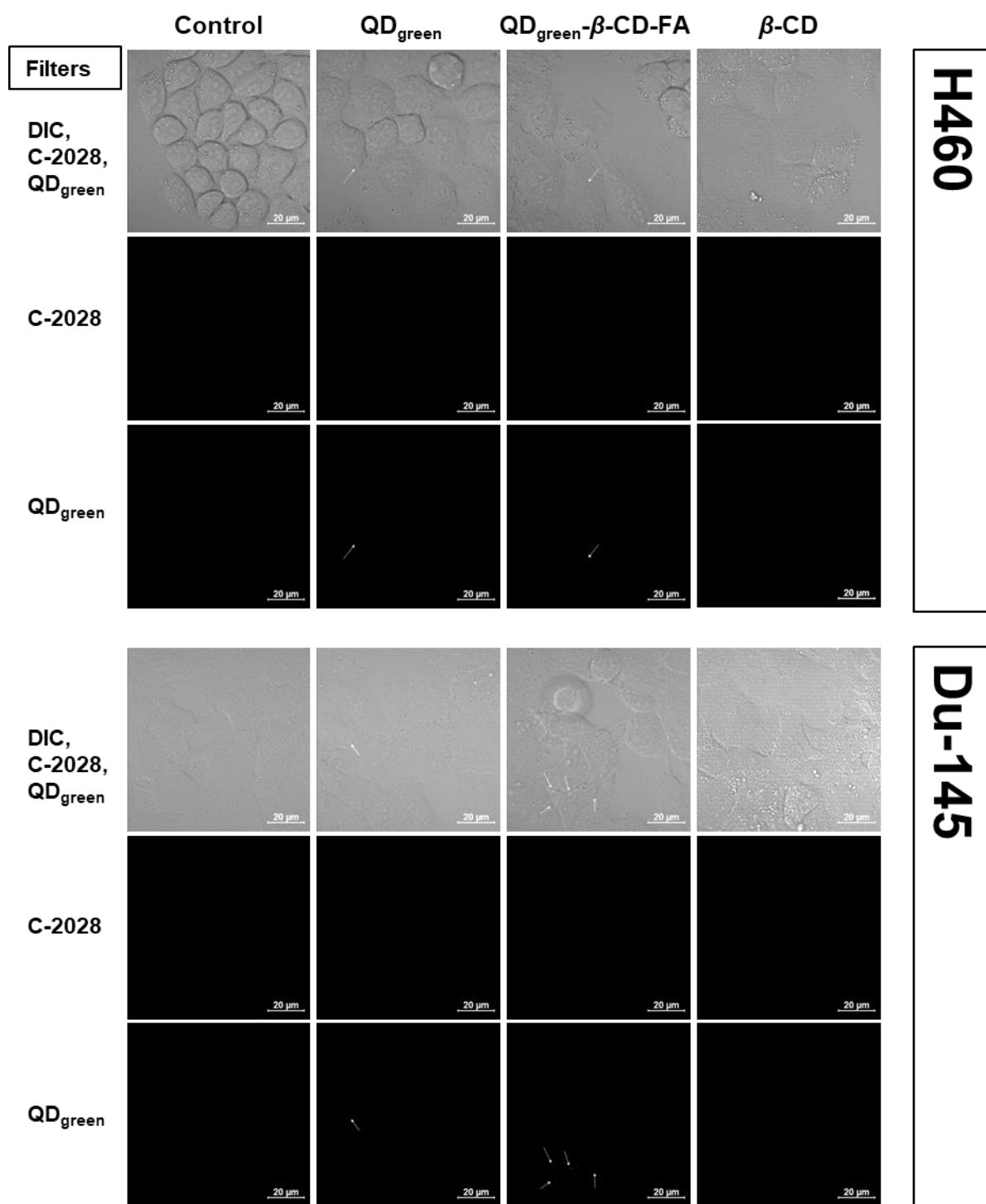
**B: nanoconjugates with QD<sub>red</sub>**

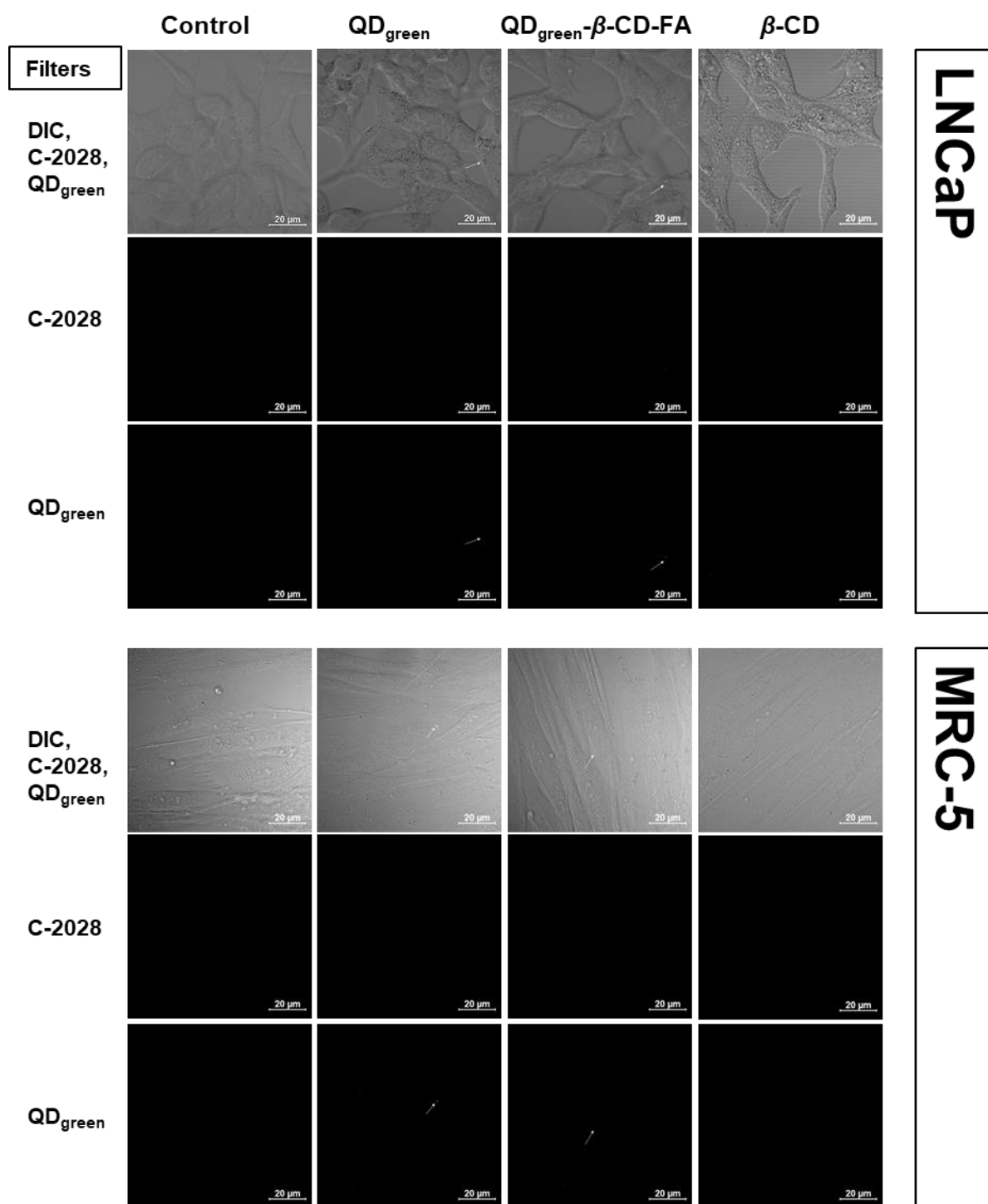


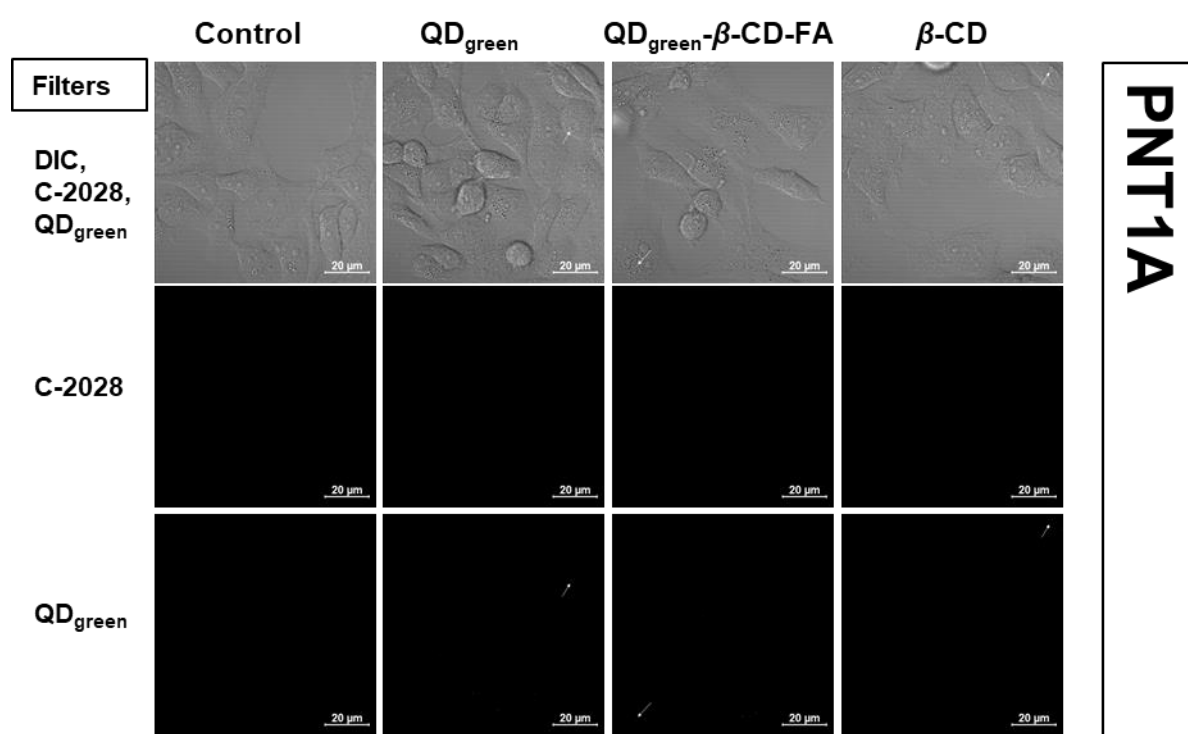
**Figure S1.** Hydrodynamic diameter, zeta potential, and normal distribution diagram of size for QDs, β-CD, QDs-β-CD-FA, and QDs-β-CD(C-2028)-FA nanoconjugates obtained in 0.02 M PBS buffer. Experimental conditions;;  $C_{\text{QD-}\beta\text{-CD-FA}} = 1.0 \text{ mg}\cdot\text{mL}^{-1}$ ;  $C_{\text{C-2028}} = 210 \text{ }\mu\text{M}$ ;  $C_{\beta\text{-CD}} = 1.0 \text{ mg}\cdot\text{mL}^{-1}$ .



**Figure S2.** Growth inhibition curves of human cancer (A) H460, (B) Du-145, and (C) LNCaP cells as well as normal (D) MRC-5 and (E) PNT1A cells treated with increasing concentration of  $\beta$ -CD, QD<sub>green</sub>, QD<sub>green</sub>- $\beta$ -CD-FA, QD<sub>red</sub>, and QD<sub>red</sub>- $\beta$ -CD-FA following 72 h of incubation. Data are expressed as the mean  $\pm$  of three independent experiments.



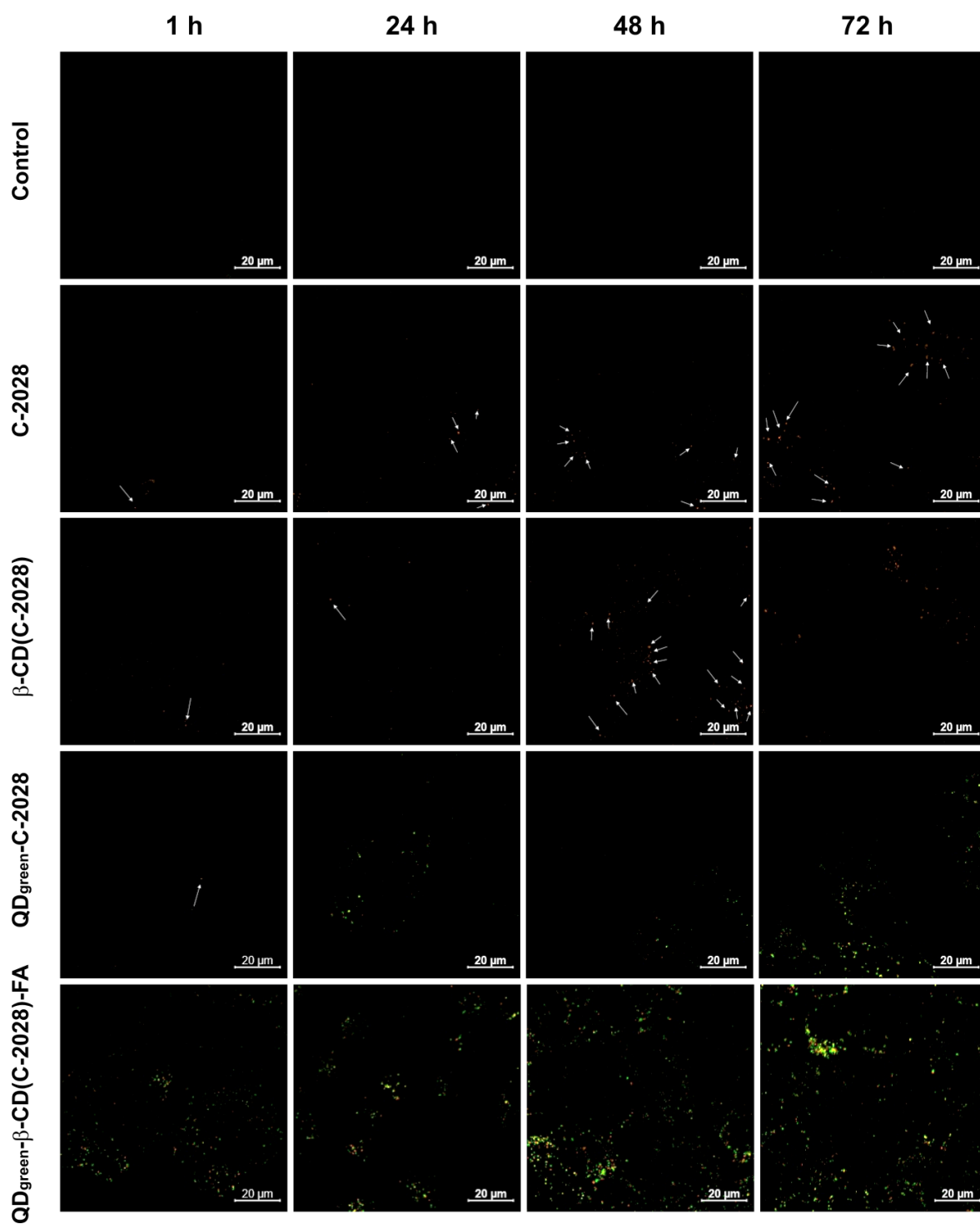




**Figure S3.** Confocal fluorescence micrographs of H460, Du-145, LNCaP, MRC-5, and PNT1A cells after 72 h of treatment with QD<sub>green</sub>, QD<sub>green</sub>- $\beta$ -CD-FA, and  $\beta$ -CD. Individual signals from different filters (DIC, for C-2028, and QD<sub>green</sub>) were indicated with a white arrow. The scale bar is 20  $\mu$ m. Data are representative of three independent experiments.

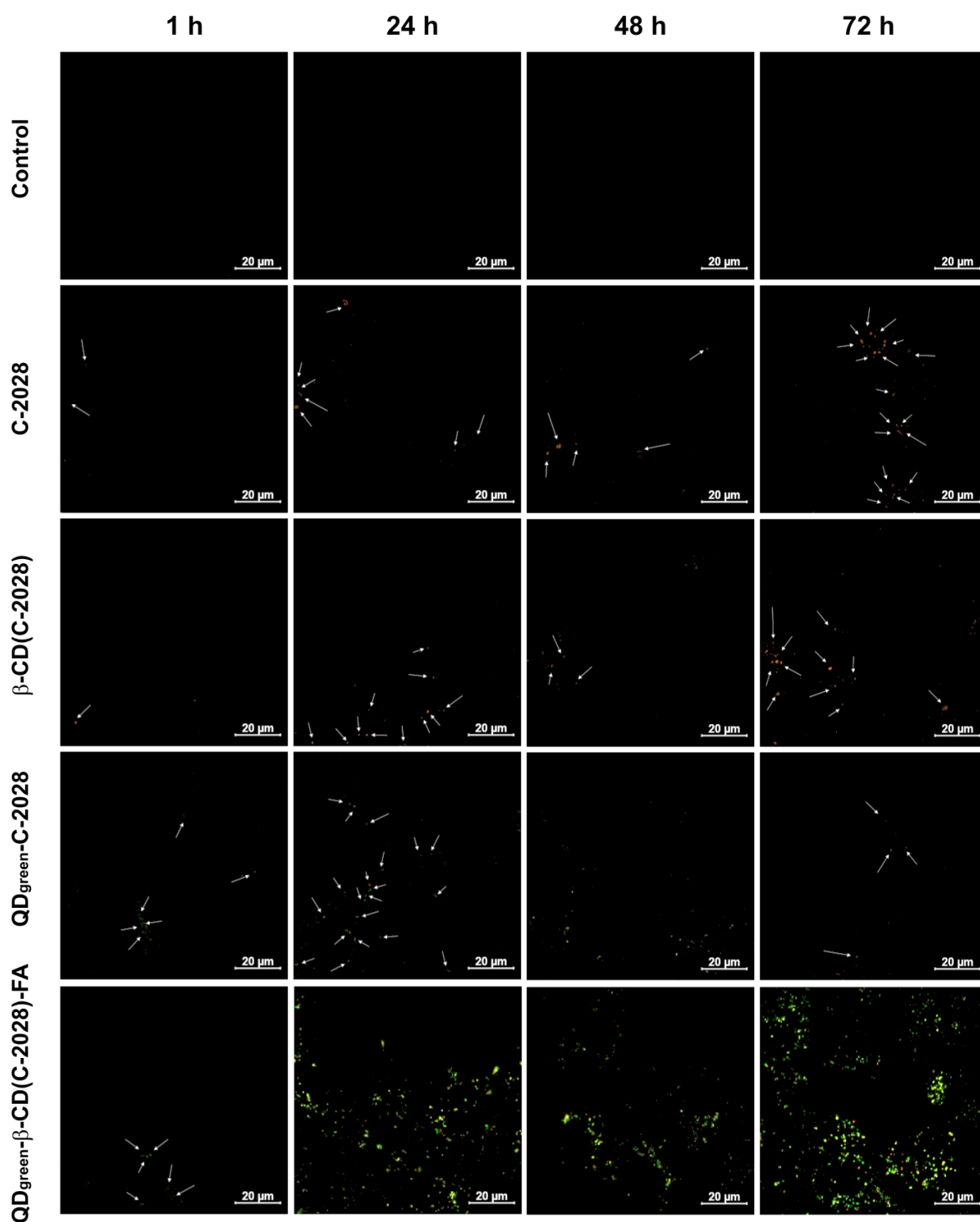
A

H460



B

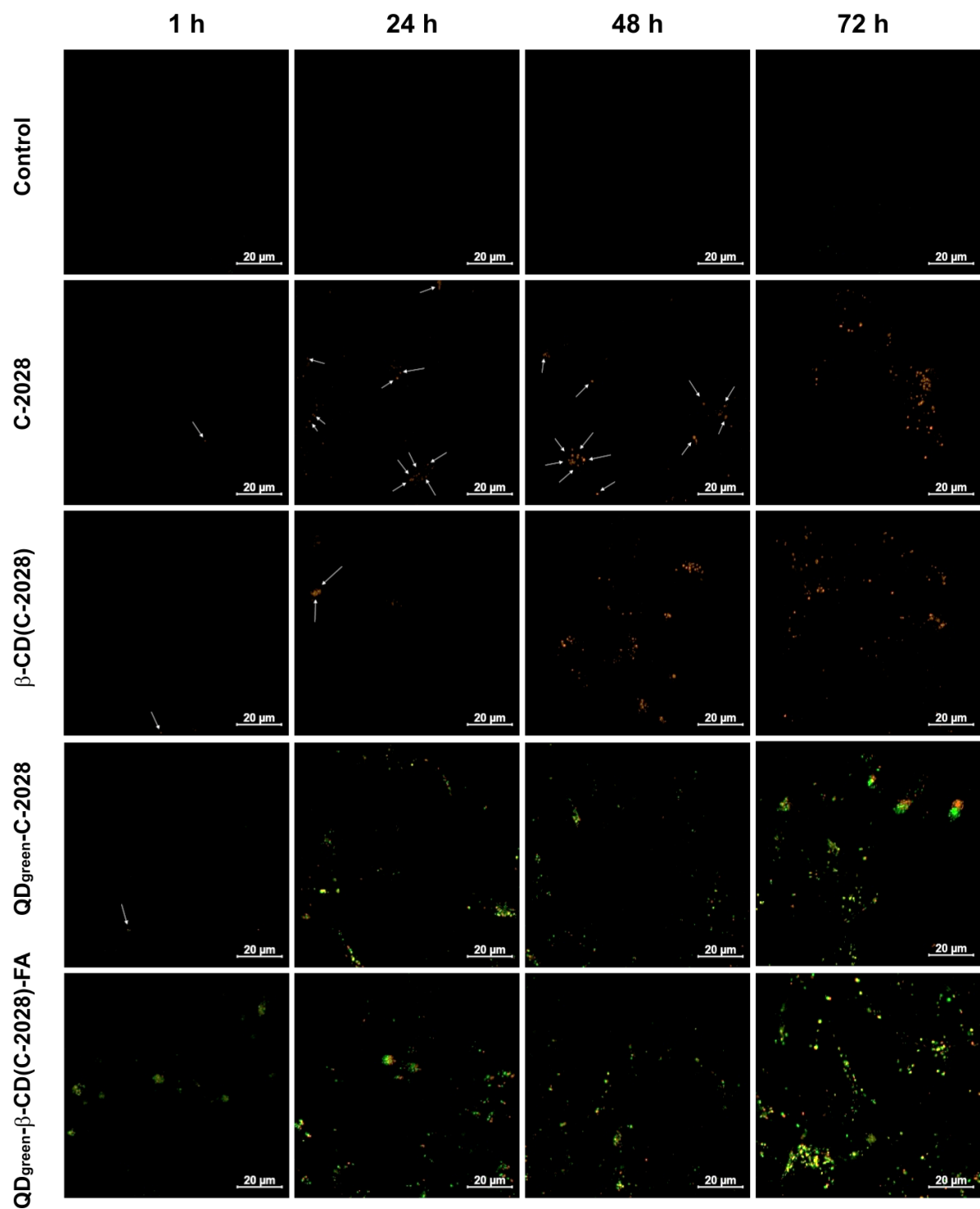
Du-145





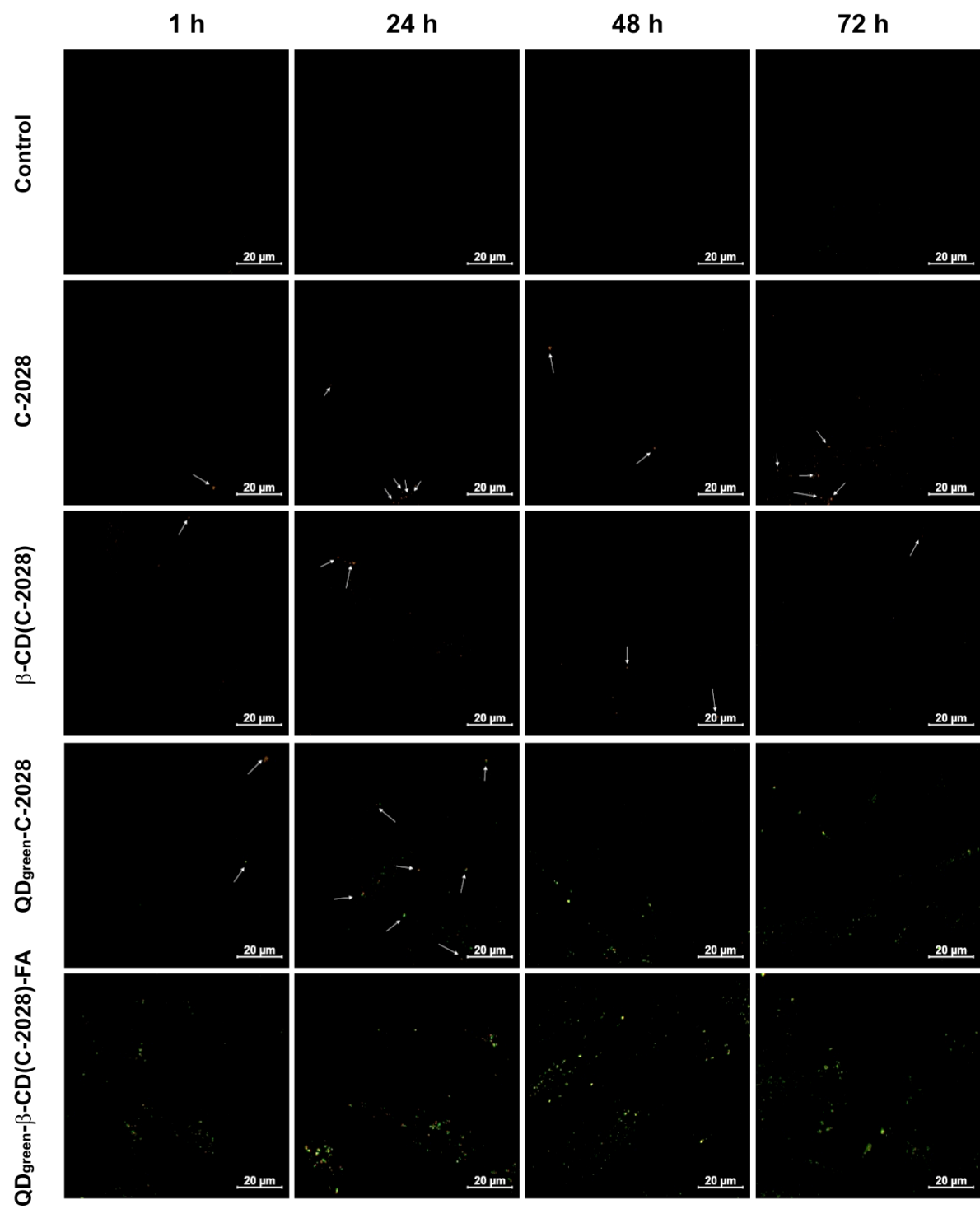
C

LNCaP



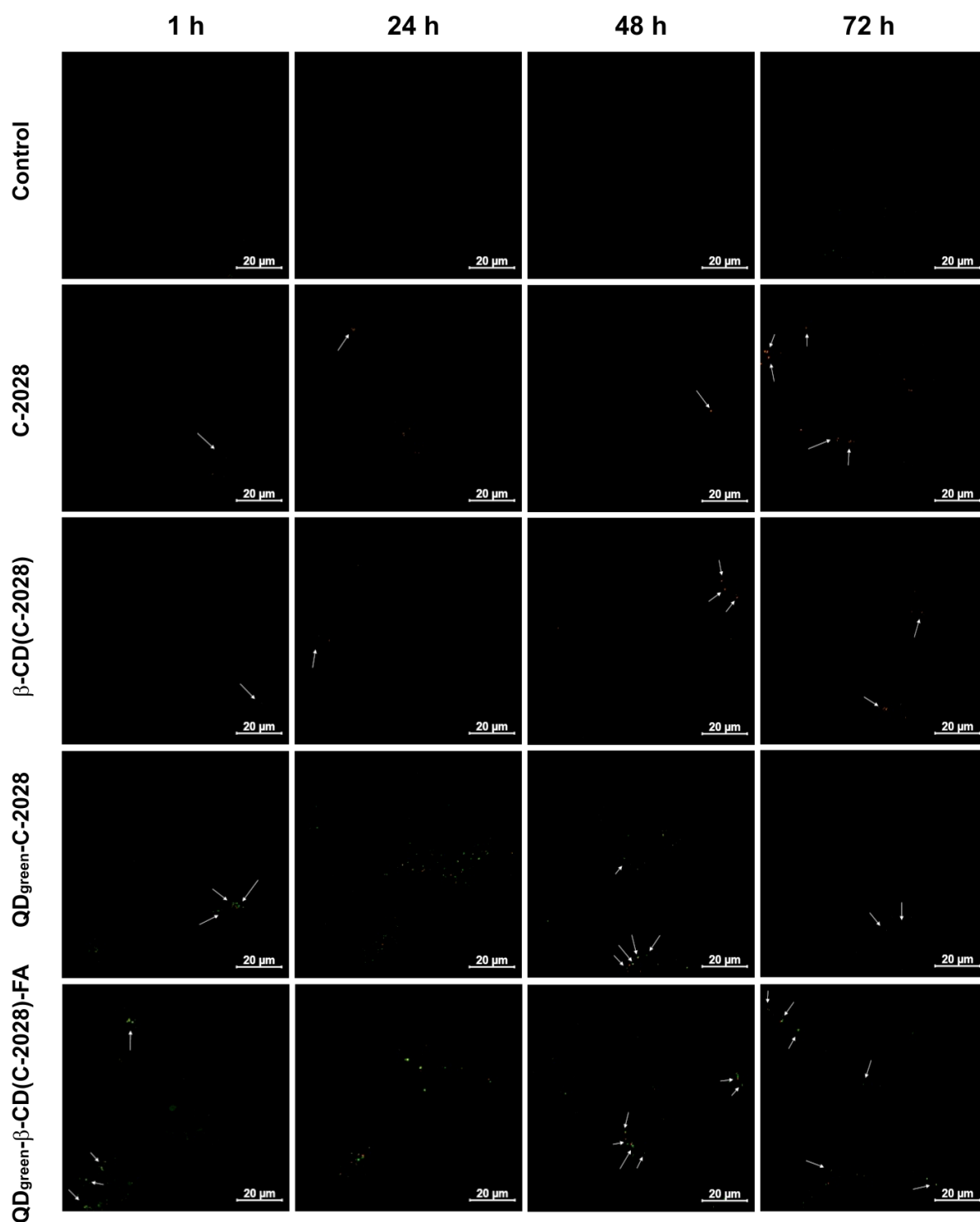
D

MRC-5



E

PNT1A



**Figure S4.** Cellular uptake of C-2028,  $\beta$ -CD(C-2028), QD<sub>green</sub>-C-2028, and QD<sub>green</sub>- $\beta$ -CD(C-2028)-FA nanoconjugates to cancer (A) H460, (B) Du-145, (C) LNCaP as well as normal (D) MRC-5 and (E) PNT1A cells for the time indicated and analyzed by CLSM. The scale bar is 20  $\mu$ m. Data represented the images of three independent experiments.