**Supporting Information**

# Target Delivery of β-Cyclodextrin/Paclitaxel Complexed Fluorescence Carbon Nanoparticles: Externally NIR light and Internally pH sensitive-Mediated Release of Paclitaxel with Bio-imaging

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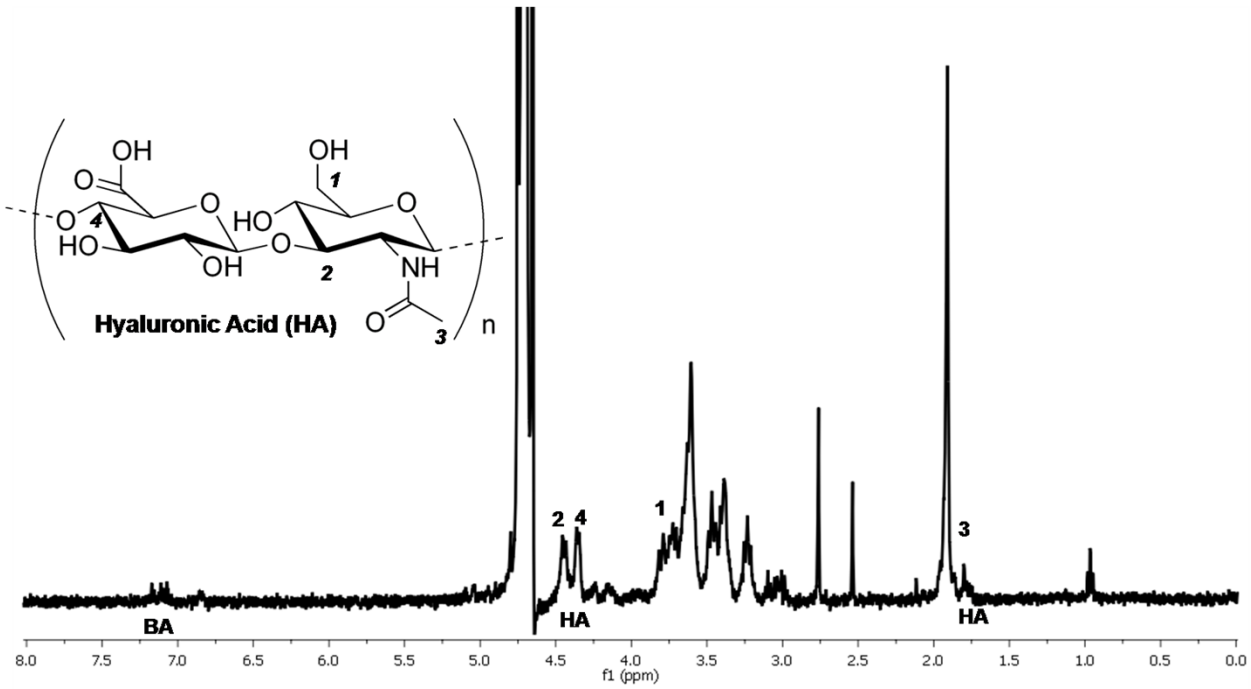


Figure S1. $^{1}H$ NMR spectra (400 MHz, $D_2O$) of HA-FCN conjugated boronic acid (HA-FCN-BA).

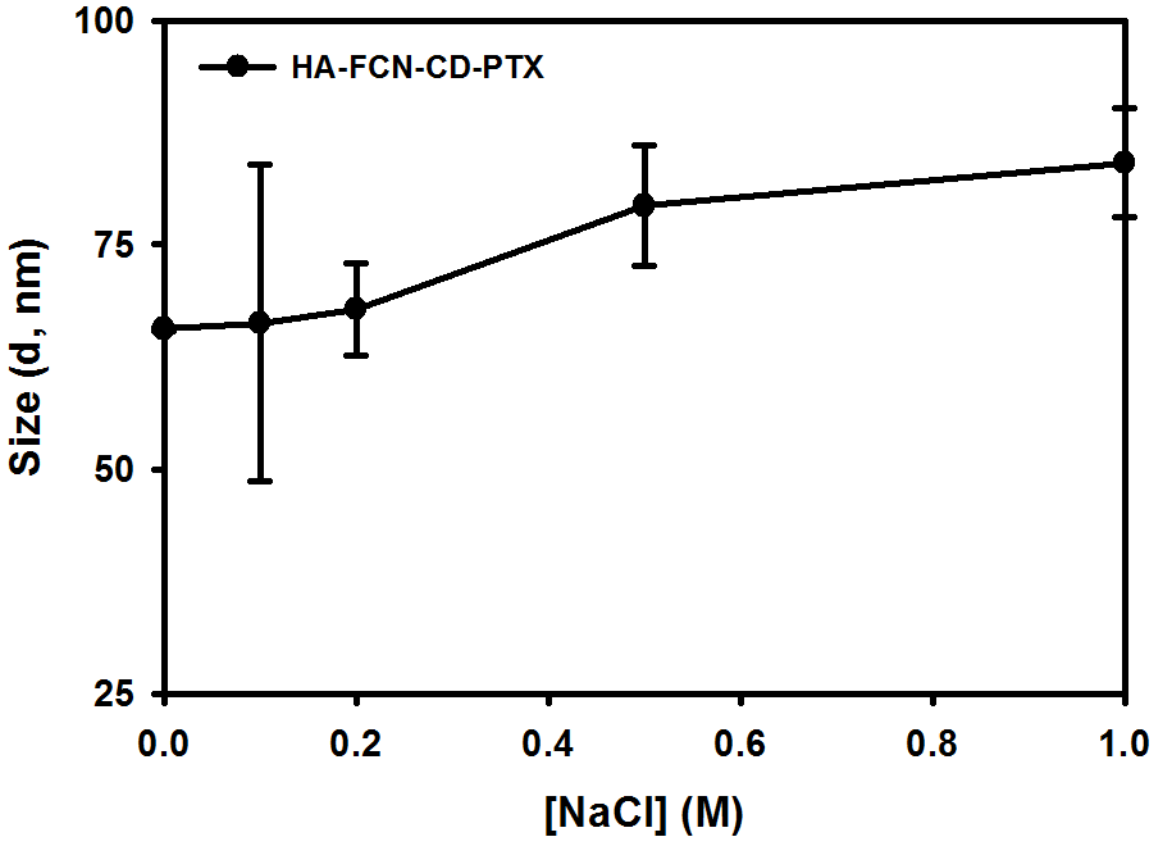


Figure S2. The salt effect on the size of HA-FCN-BA-β-CD-PTX in 0.1mg/mL, where [NaCl] = 0, 0.1, 0.2, 0.5 and 1.0 M. Error bars represent ±s.d. from *n*=5.

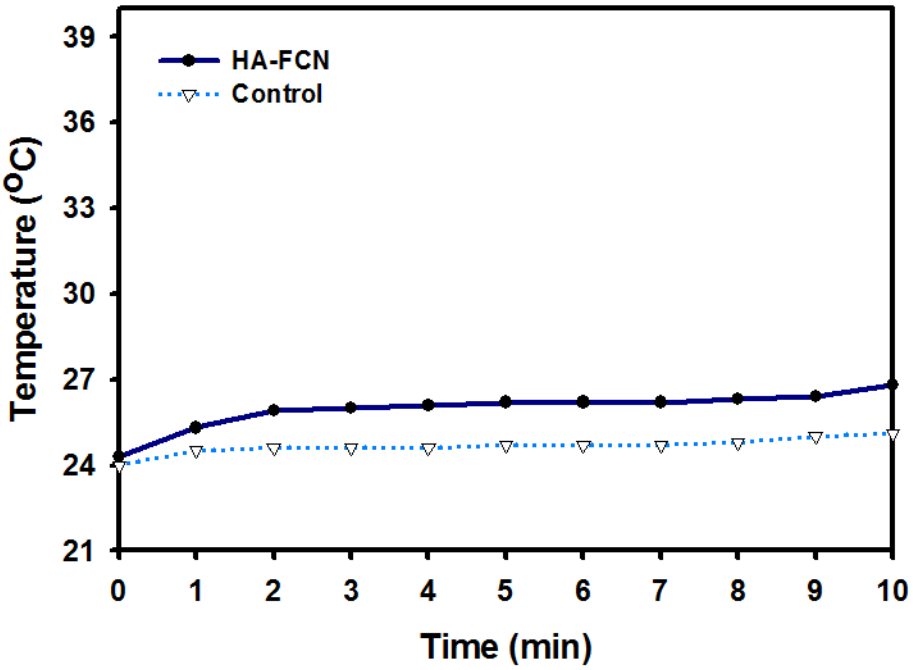


Figure S3. The temperature elevation curve of aqueous solution (1 mg/mL) of HA-FCN and control ($H_2O$) as a function of NIR (808 nm laser) irradiation time.

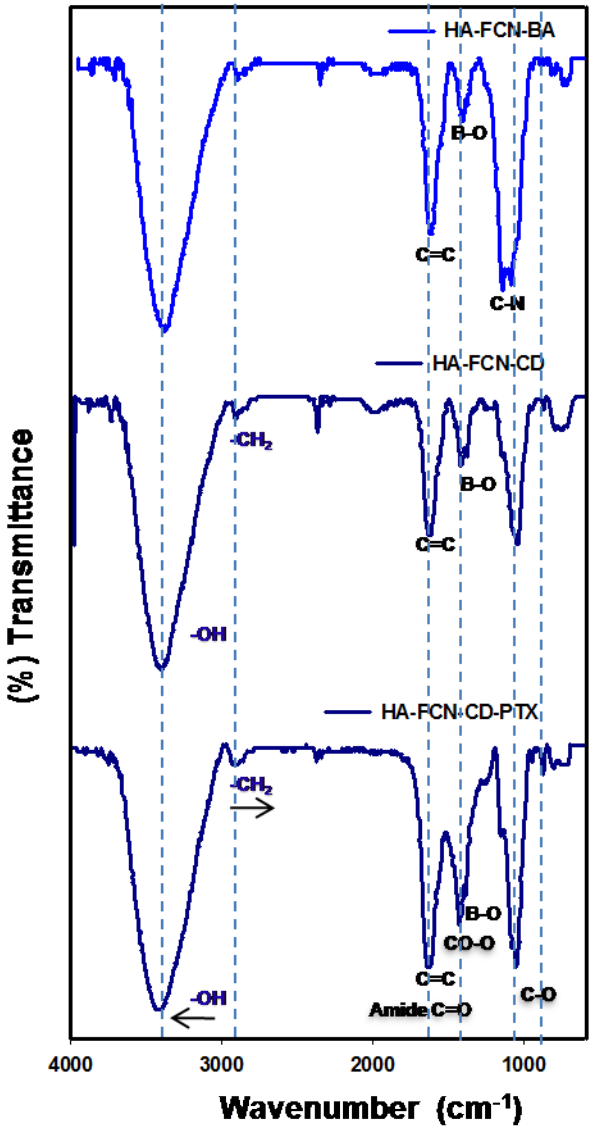


Figure S4. The FT-IR transmittance peaks of HA-FCN-BA, HA-FCN-CD and HA-FCN-BA-CD-PTX, respectively.

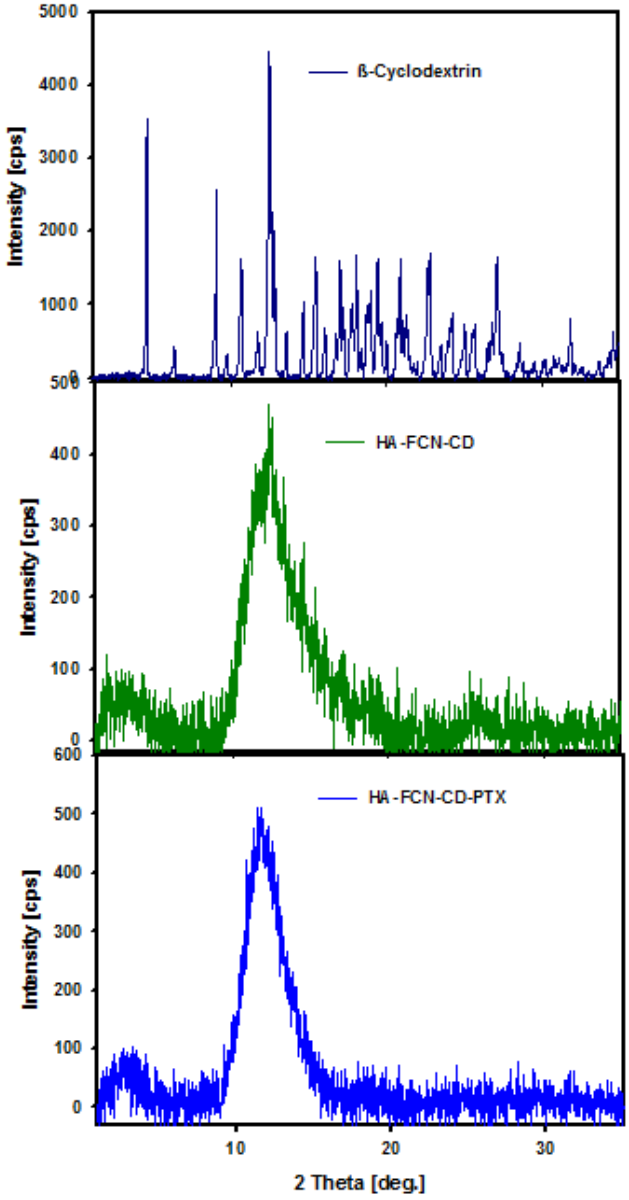


Figure S5. The XRD diffraction pattern of β-cyclodextrin (β-CD), HA-FCN-CD, and HA-FCN-CD-PTX, respectively.

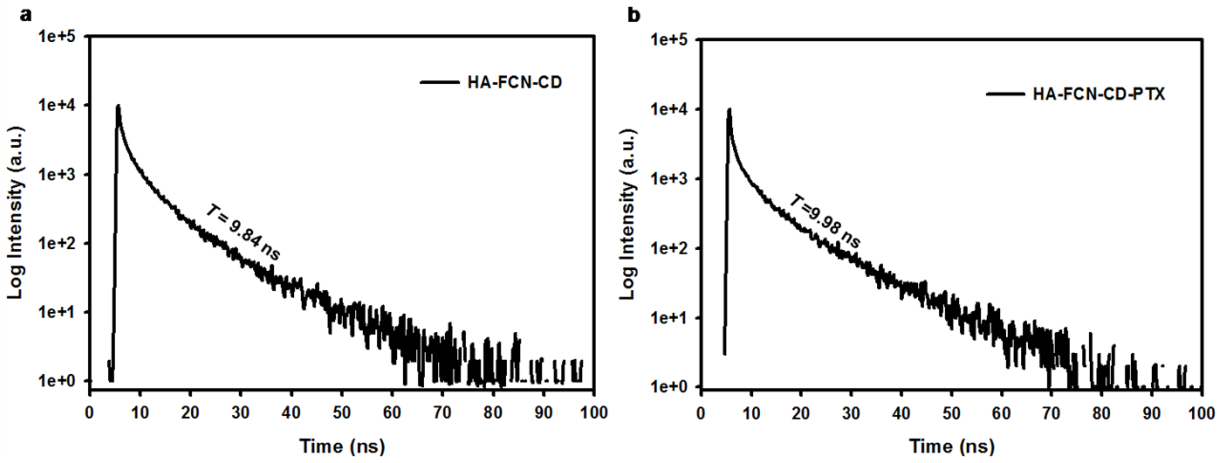


Figure S6. Fluorescence life time curve of HA-FCN-CD (a) and HA-FCN-CD-PTX (b) in 375 nm wavelength. The τ value indicates respective fluorescence lifetime.

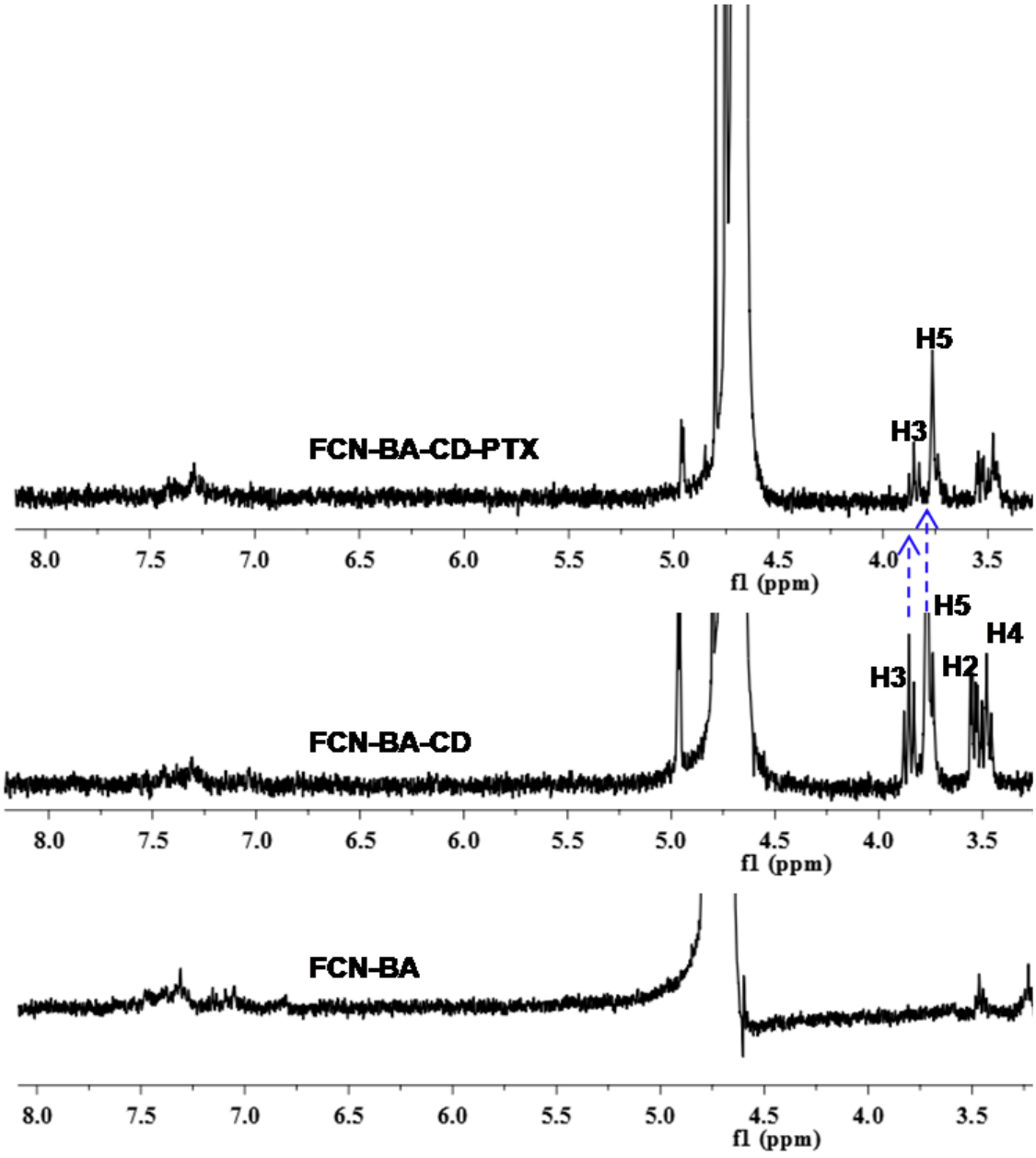


Figure S7. $^{1}H$ NMR spectra (400 MHz, $D_2O$) of FCN conjugated boronic acid (FCN-BA), FCN-BA-CD and FCN-BA-CD-PTX, respectively.

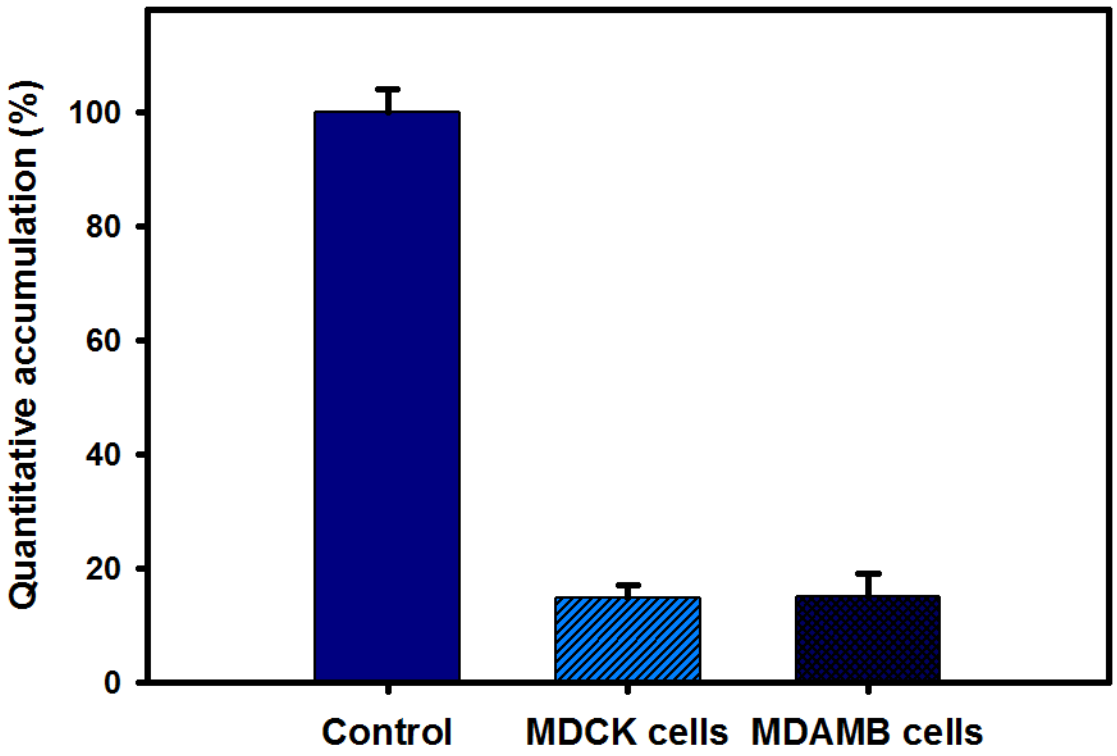


Figure S8. The *in vitro* quantitative analysis of cellular uptake of FCN-CD-PTX in MDCK and MDAMB cells.

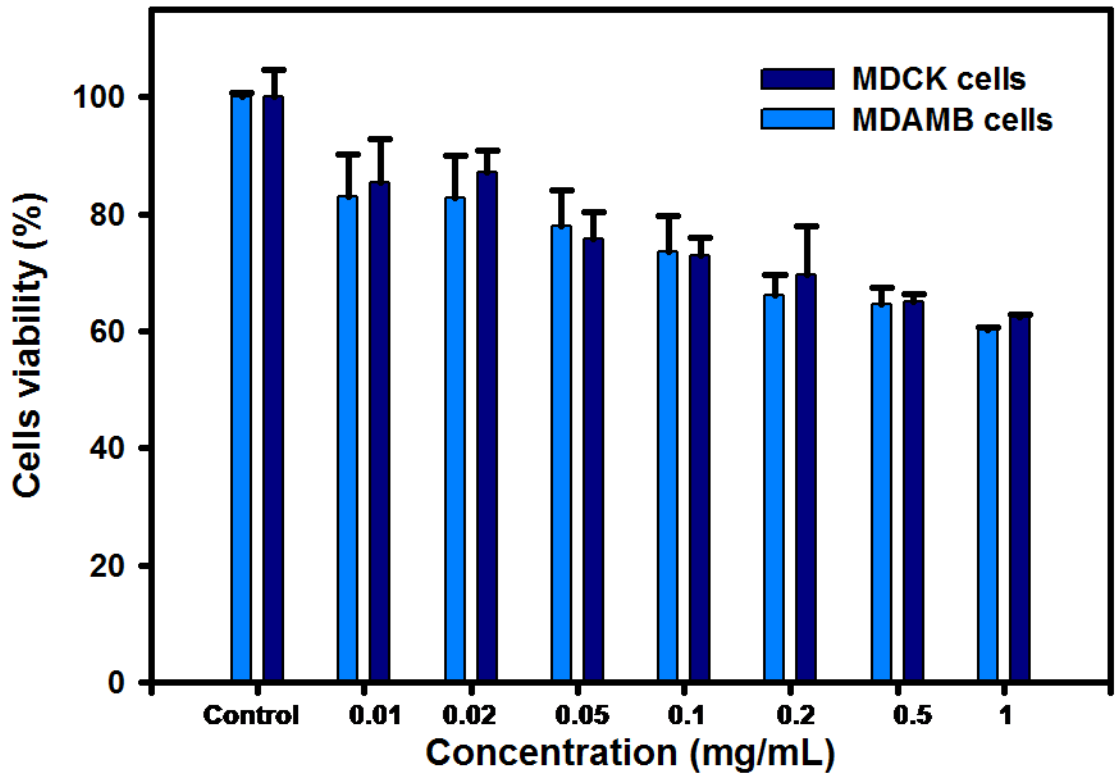


Figure S9. MTT assay for *in vitro* anticancer effects in absence of HA. Cell viability when treated with various concentrations of FCN-CD-PTX in MDCK and MDAMB cells line.

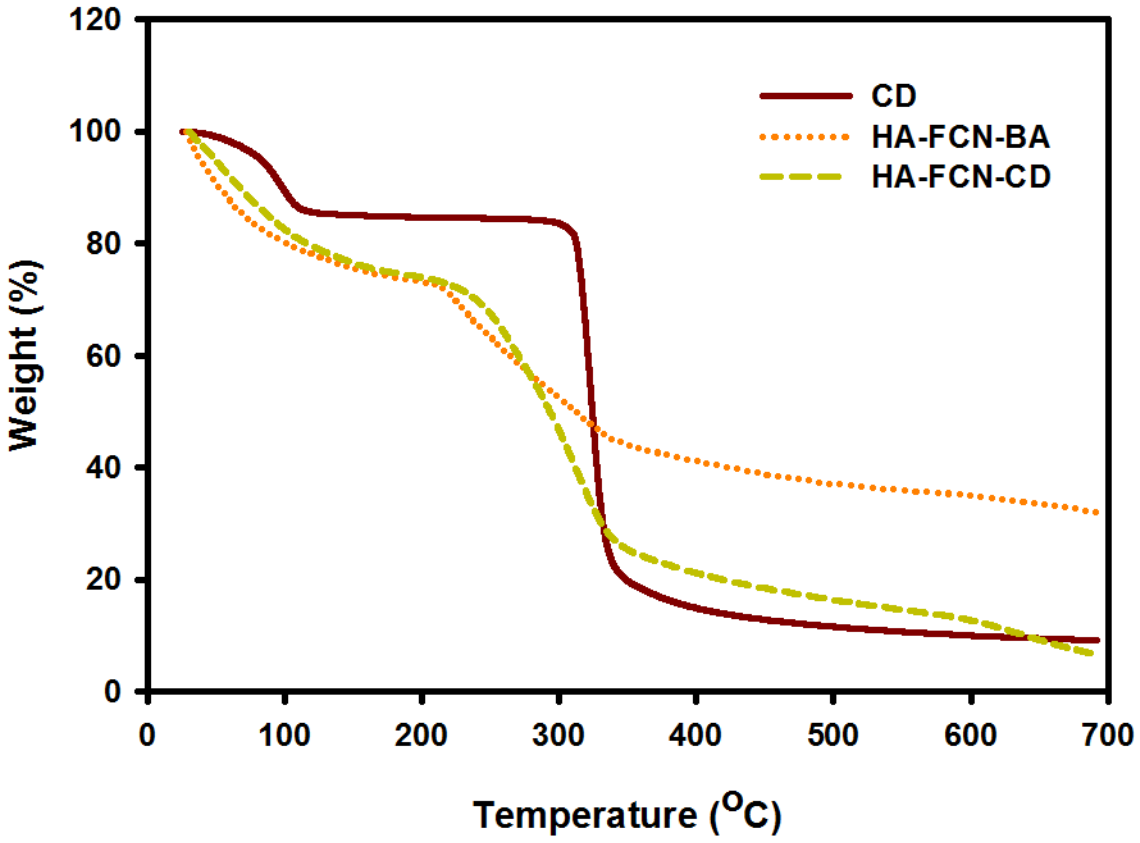


Figure S10. The comparison of thermogravimetric analysis (TGA) of the CD, HA-FCN-BA and HA-FCN-CD as a function weight loss and temperature (°C).

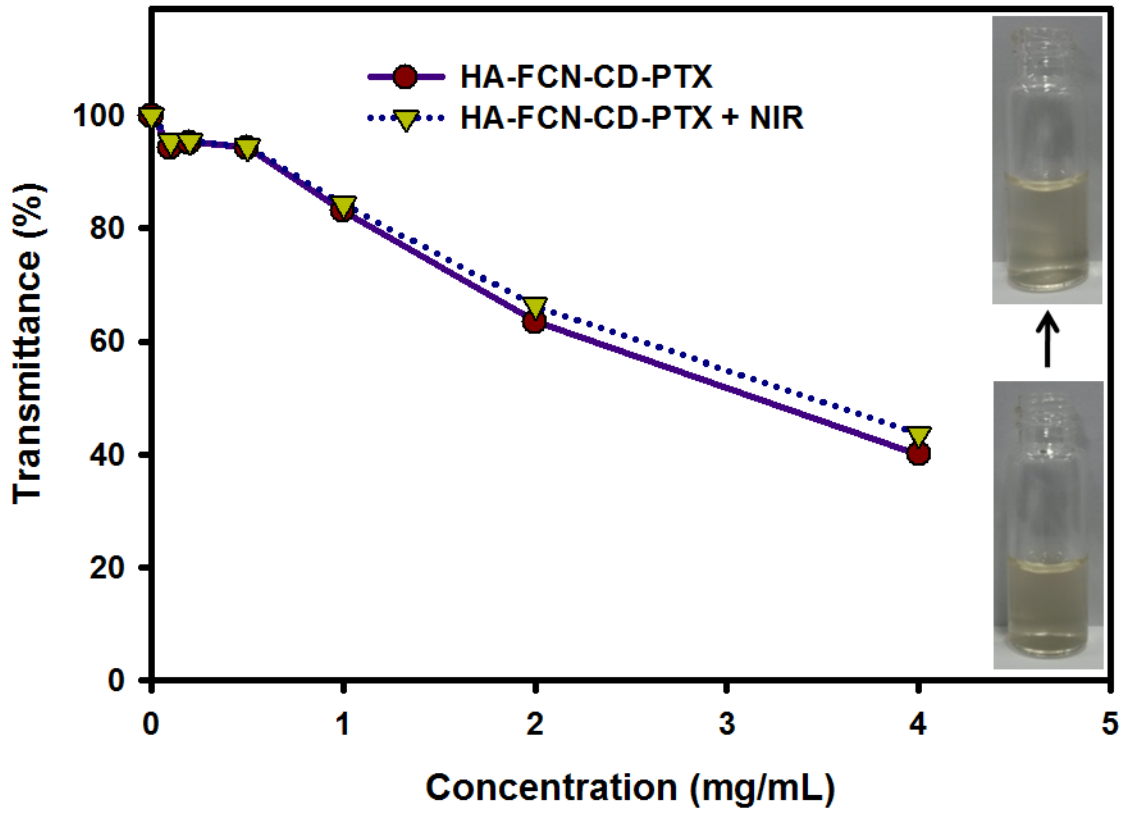


Figure S11. The solubility and transmittance study of HA-FCN-CD-PTX at different concentrations (0 - 4 mg/mL) in response to 5 min NIR irradiation (808 nm, 2 W/cm$^2$).

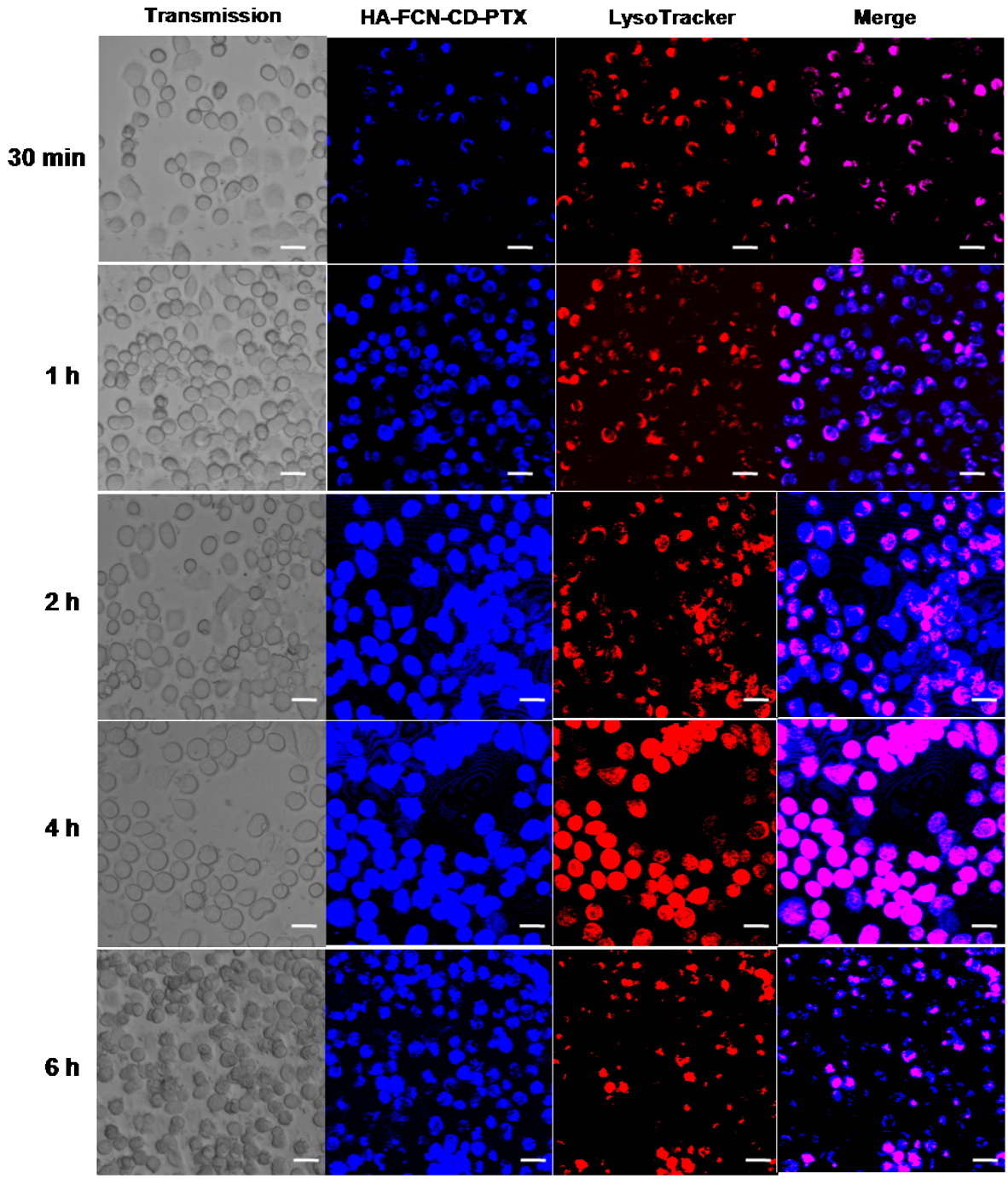


Figure S12. Confocal laser scan microscope (CLSM) image of MDAMB cells incubated with HA-FCN-CD-PTX for 30 min, 1 h, 2 h, 4 h and 6 h (HA-FCN-CD-PTX concentration: 0.1 mg/mL and NIR irradiation 5 min). (Blue, HA-FCN-CD-PTX; Red, LysoTracker). The scale bars represent a distance of 20 μm.