nanomaterials

Supplementary Materials

Injectable Glycol Chitosan Hydrogel Containing Folic Acid-Functionalized Cyclodextrin-Paclitaxel Complex for Breast Cancer Therapy

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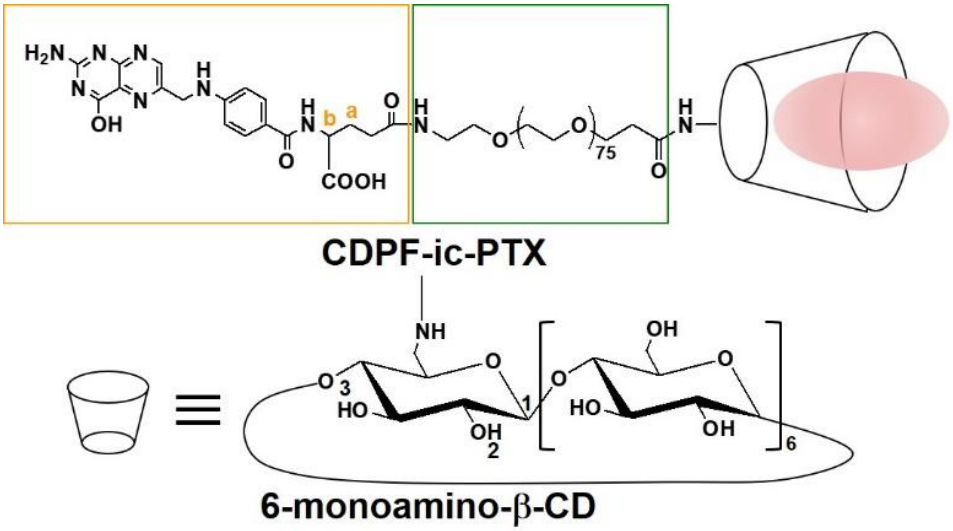
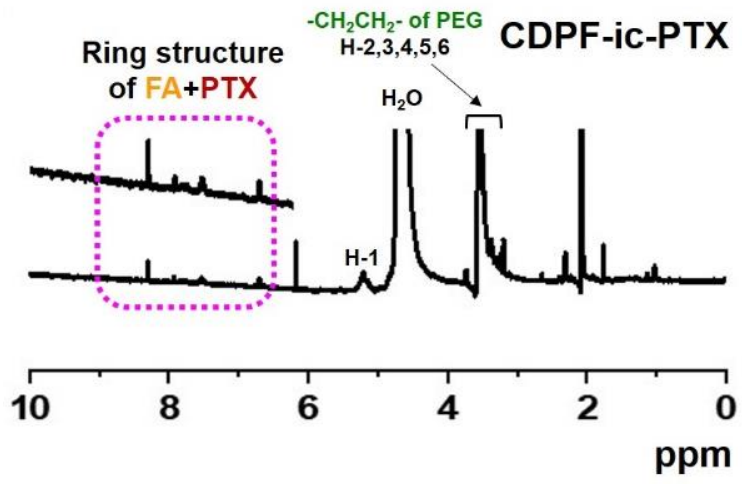
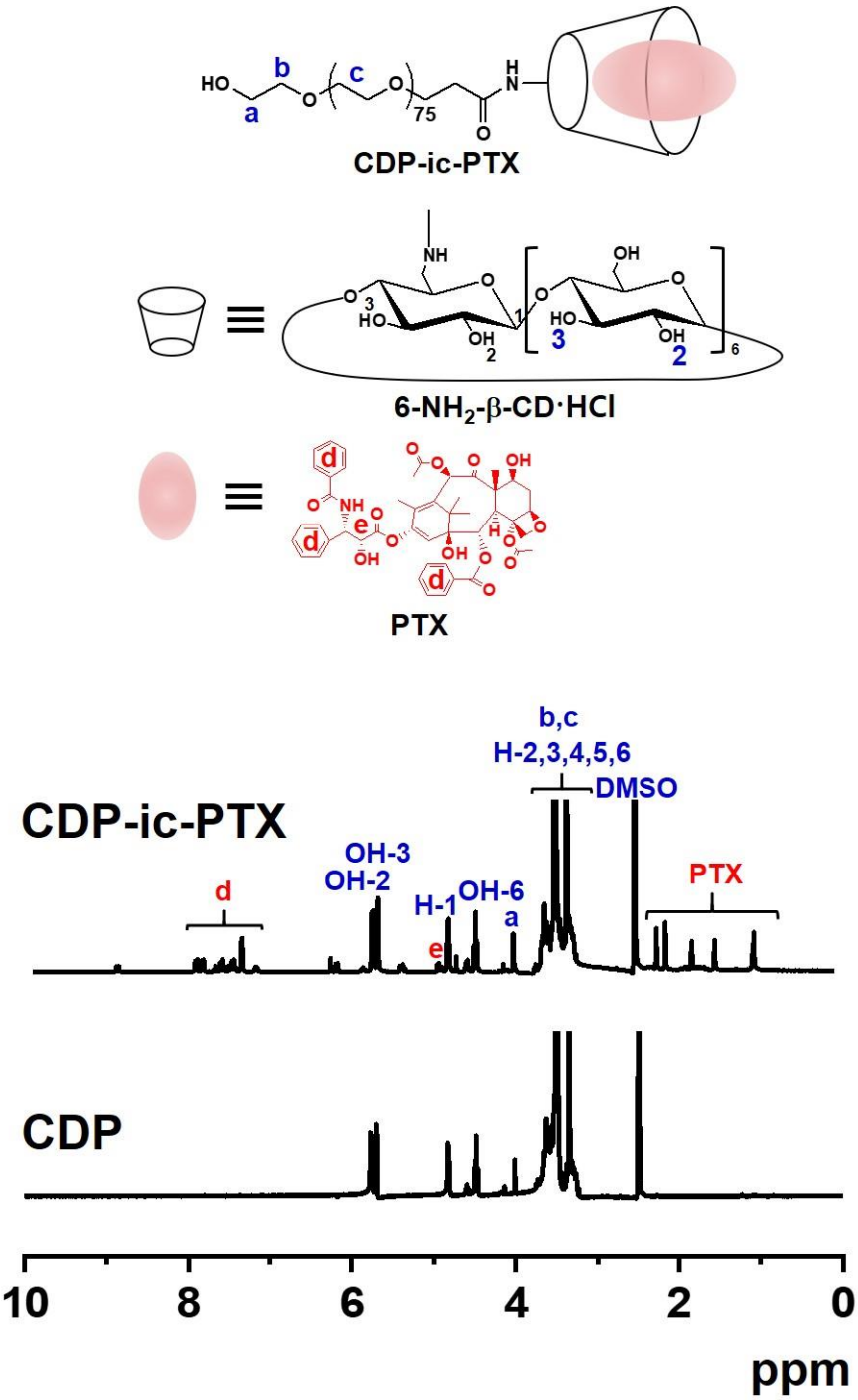

CDPF-ic-PTX

6-monoamino-β-CD

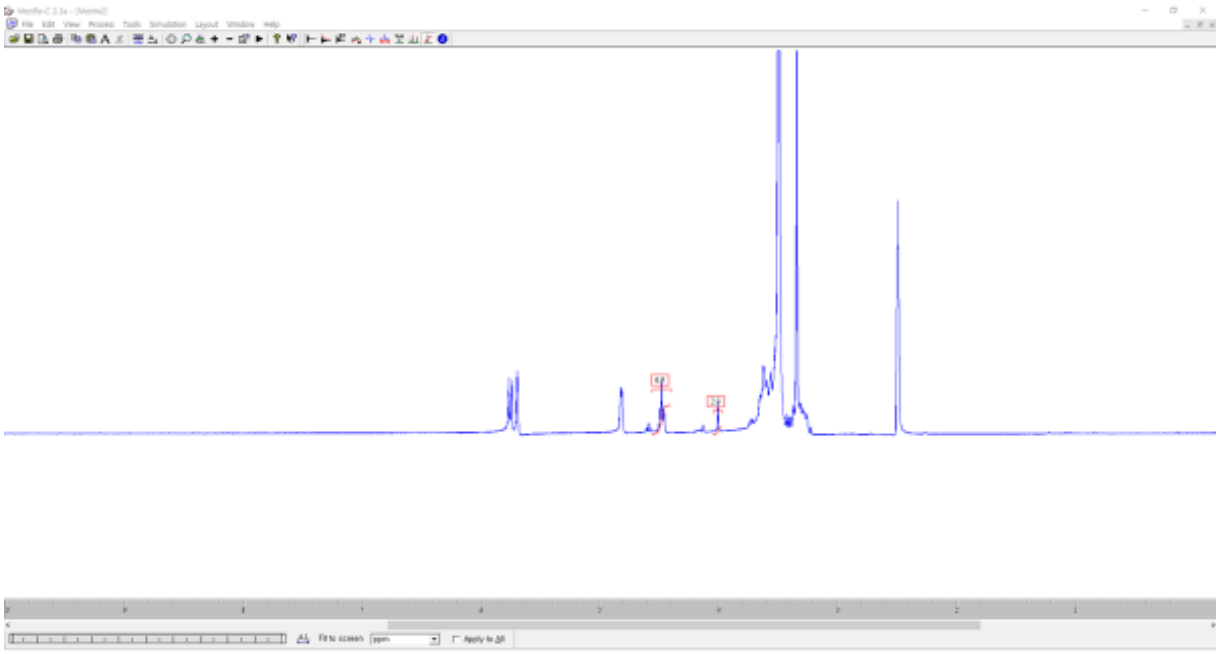

PTX


Ring structure
of FA+PTX
-CH2CH2- of PEG
H-2,3,4,5,6
CDPF-ic-PTX
H2O
H-1
10
8
6
4
2
0
ppm

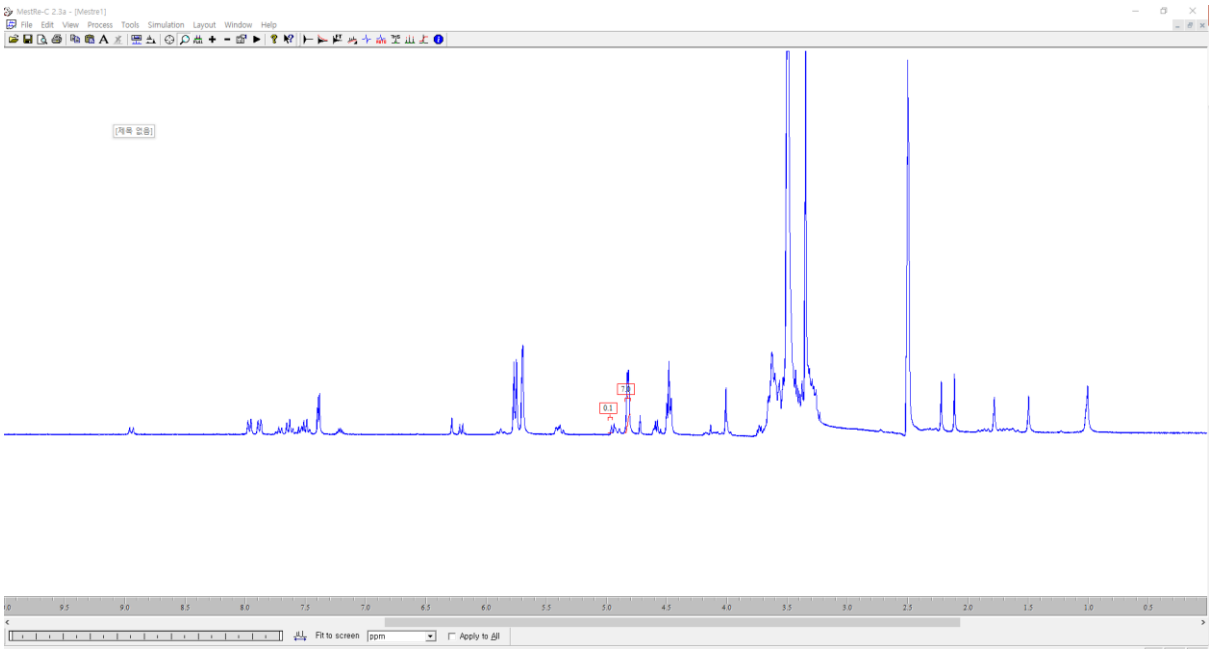
(a)


CDP-ic-PTX
6-NH2-β-CD·HCl
PTX
CDP-ic-PTX
CDP
b,c
H-2,3,4,5,6
DMSO
PTX
OH-3
OH-2
H-1
OH-6
d
e
a
10
8
6
4
2
0
ppm

(b)



(c)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[제목 없음]
7.8
0.1
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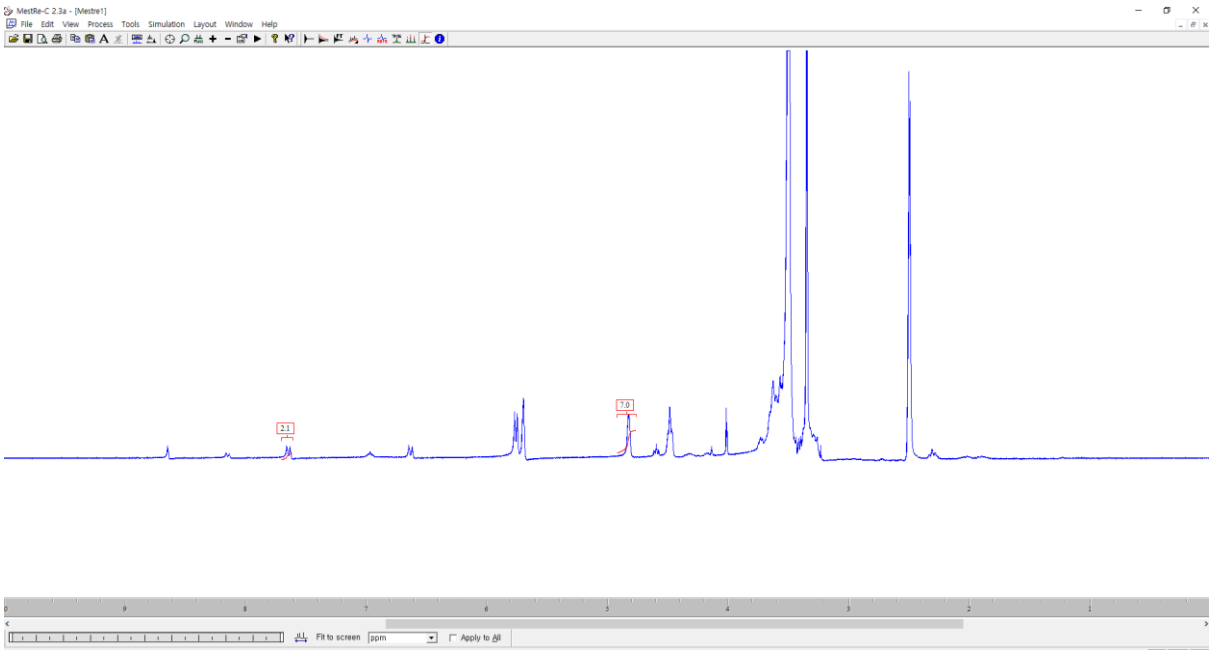
ppm
Apply to All

(d)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7.0
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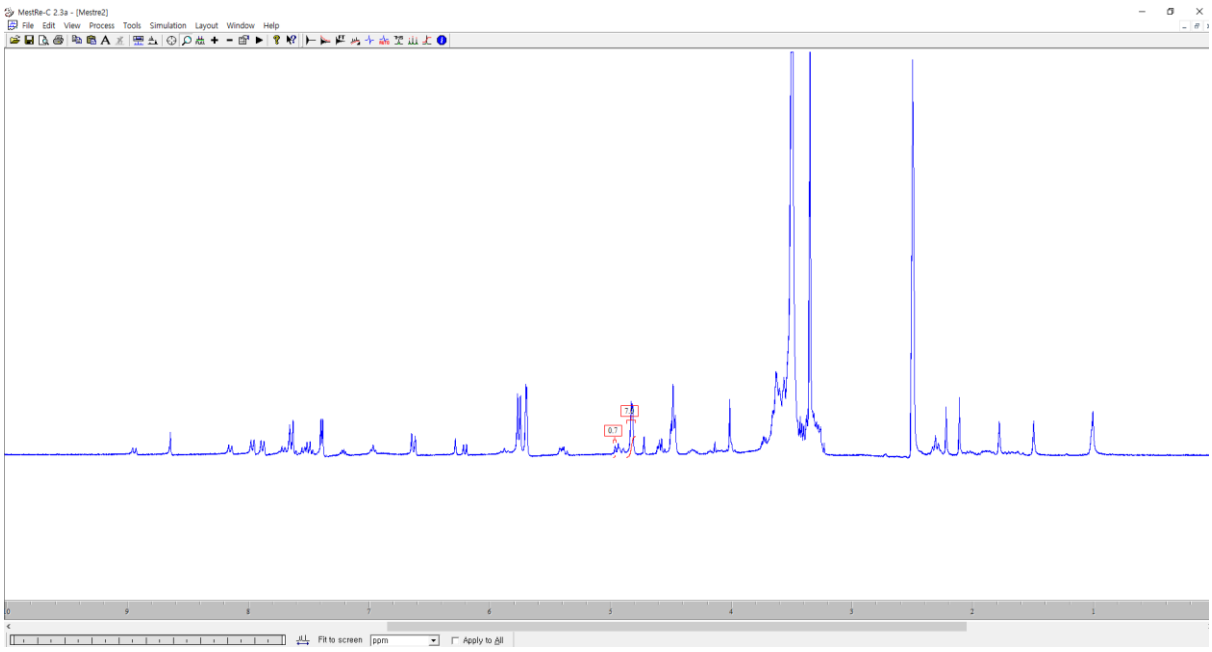
(e)



(f)

Figure S1. (**a**) ^{1}H NMR spectrum of CDPF-ic-PTX analyzed using D_2O. (**b**) ^{1}H NMR spectra of CDP and CDP-ic-PTX analyzed using DMSO-*d6*. (**c**) ^{1}H NMR spectrum of CDP. (**d**) ^{1}H NMR spectrum of CDP-ic-PTX. (**e**) ^{1}H NMR spectrum of CDPF. (**f**) ^{1}H NMR spectrum of CDPF-ic-PTX.

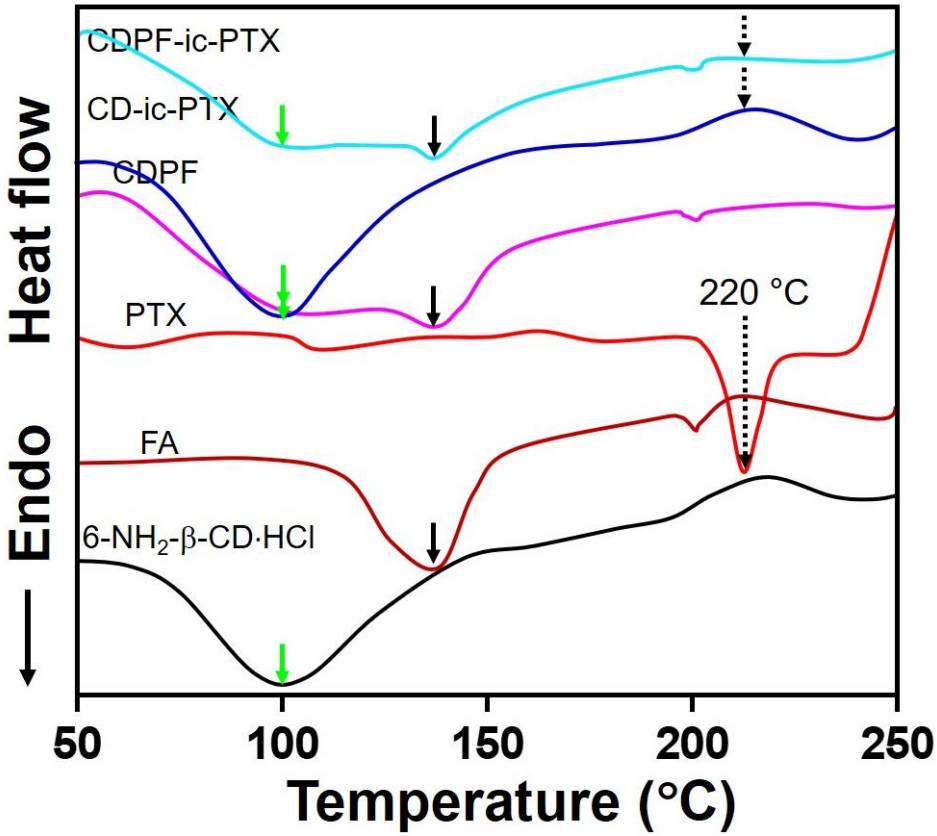


Figure S2. DSC curves of 6-NH_2-β-CD·HCl, FA, PTX, CDPF, CD-ic-PTX, and CDPF-ic-PTX monitored from 50 °C nm to 400 °C. Inclusion complex between CDPF and PTX made the specific endothermic peak (220 °C) of PTX disappear. The green, black, and black dotted lines indicate the endothermic peak positions of 6-NH_2-β-CD·HCl, FA, and PTX, respectively. Due to the inclusion complex formation between the ring molecules and PTX, CD-ic-PTX, and CDPF-ic-PTX exhibited the disappearance of endothermic peak of PTX.

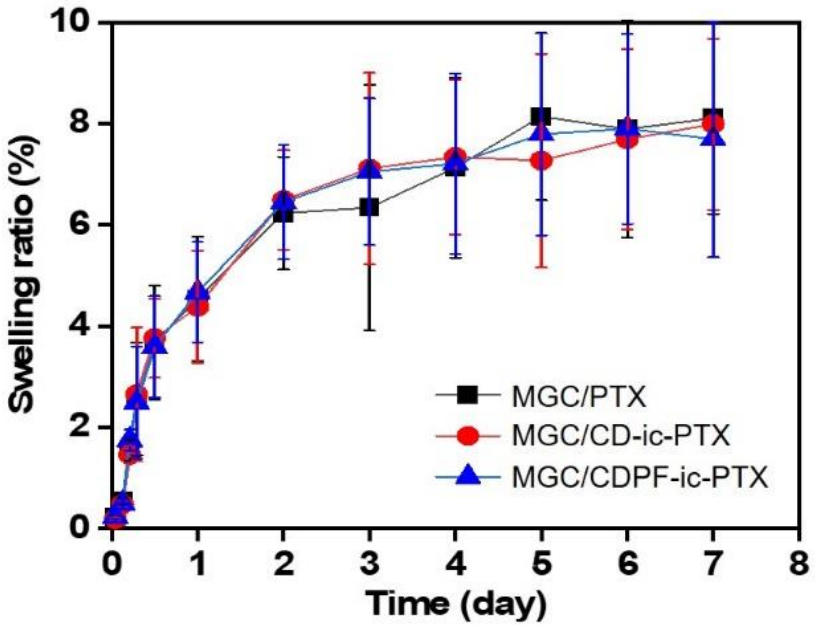


Figure S3. Swelling ratio of MGC/PTX, MGC/CD-ic-PTX and MGC/CD-ic-PTX photopolymerizable by visible light irradiation for 10 s, which was measured for 7 days. Three experiments were performed (n = 3).

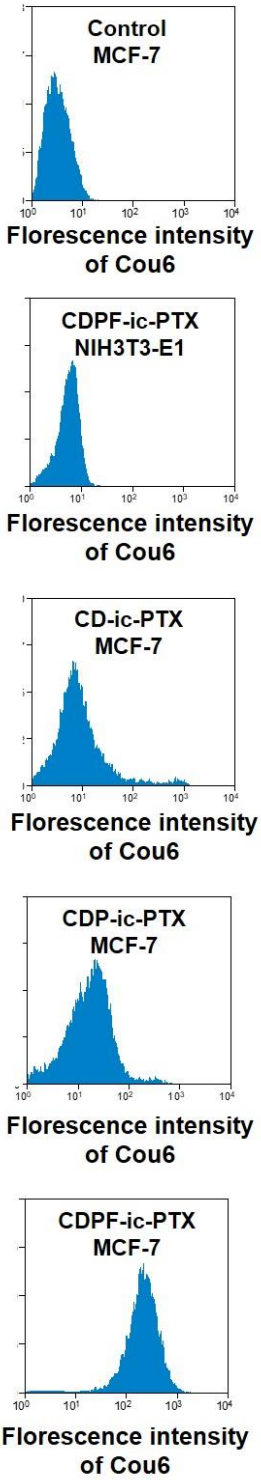


Figure S4. Flow cytometry assay of control (MCF-7), CD-ic-PTX/CDP-ic-PTX/CDPF-ic-PTX-treated MCF-7, and CDPF-ic-PTX-treated NIH3T3-E1.