

Supporting Information

Mesoporous silica nanoparticles based cisplatin prodrug delivery and anticancer effect under reductive cellular environment

Byungjun Ahn, Juhee Park, Kaushik Singha, Hansoo Park, Won Jong Kim

1. Fluorescamine assay

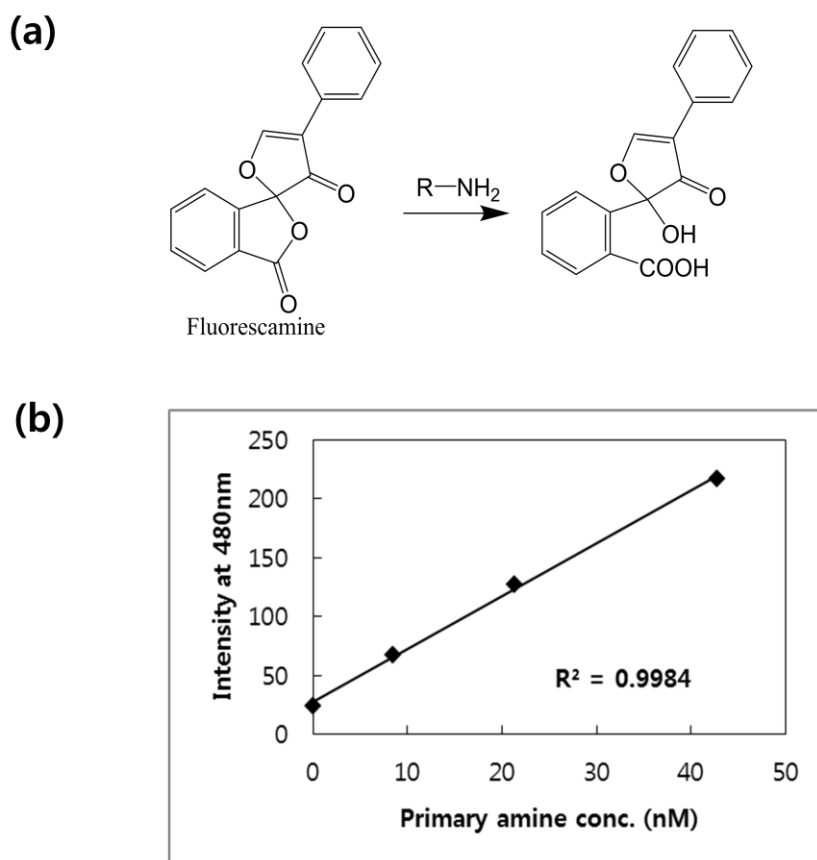
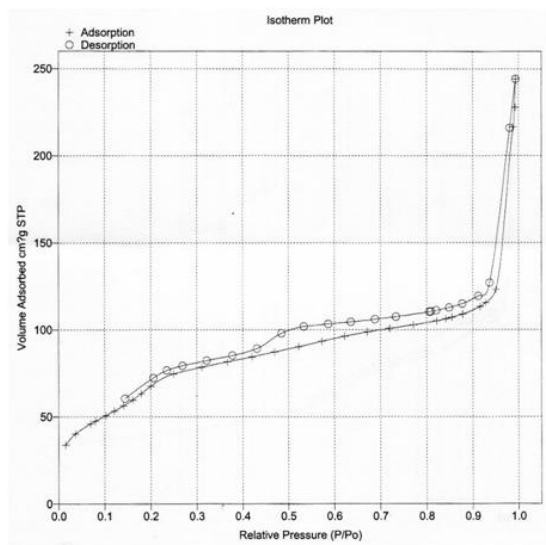


Figure S1. Fluorescamine assay. (a) Mechanism of fluorescamine reaction with primary amine, (b) Standard curve with APTES..

2. BET and BJH analysis

(a)



(b)

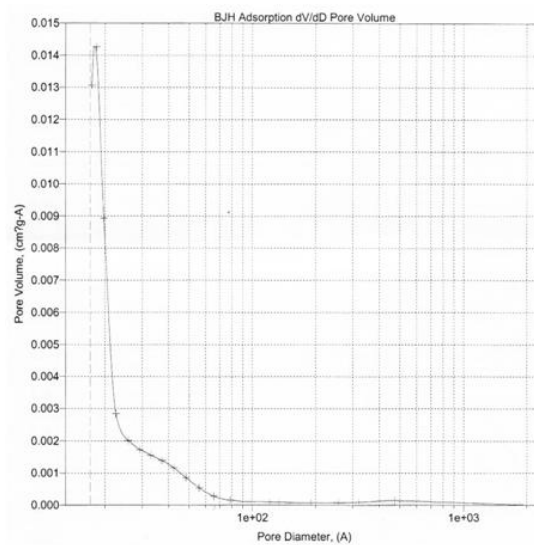


Figure S2. Surface area (a) and pore volume and diameter (b) plots

3. Zeta potential measurement of prodrug-MSN carrier (10% prodrug loading)

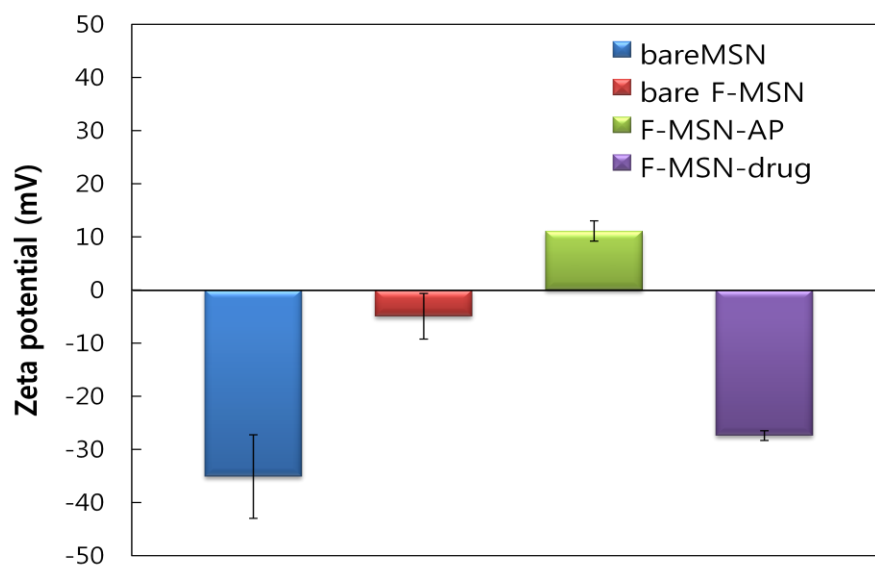


Figure S3. Zeta potential values of bare MSN, F-MSN, F-MSN-AP and F-MSN-drug. Bare MSN was prepared without FITC-APTES. F-MSN-drug (weight of loaded prodrug / weight of F-MSN-prodrug is 10%).

4. Synthesis of Pt-quantification dye

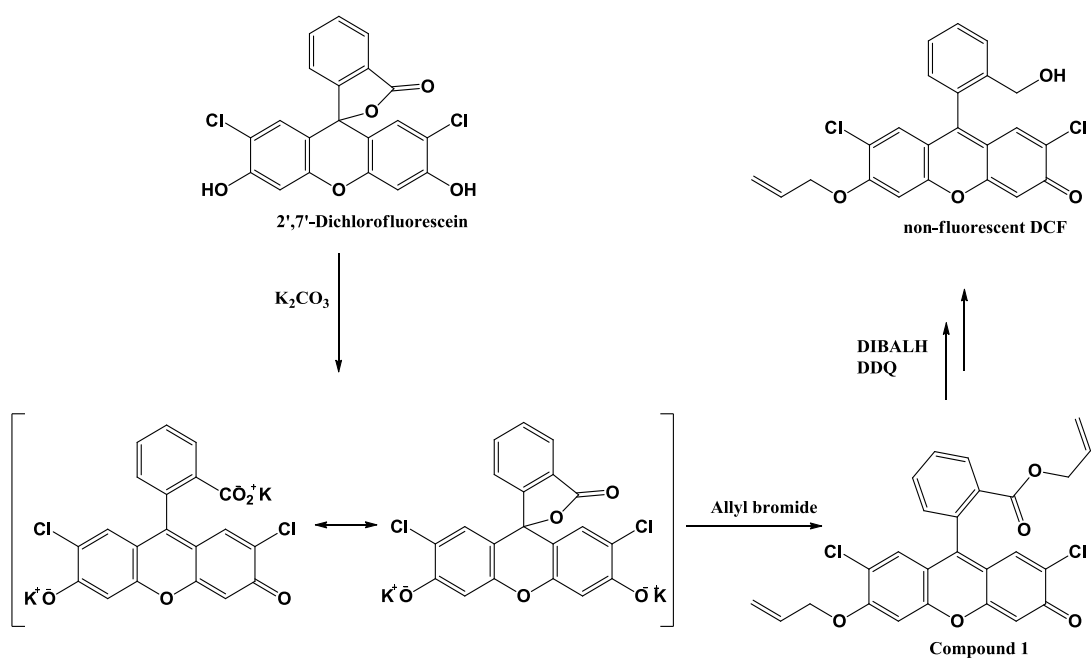


Figure S4. Synthetic scheme of non-fluorescent DCF from 2',7'-dichlorofluorescein.

5. Cell toxicity of MSN only and F-MSN-drug carrier

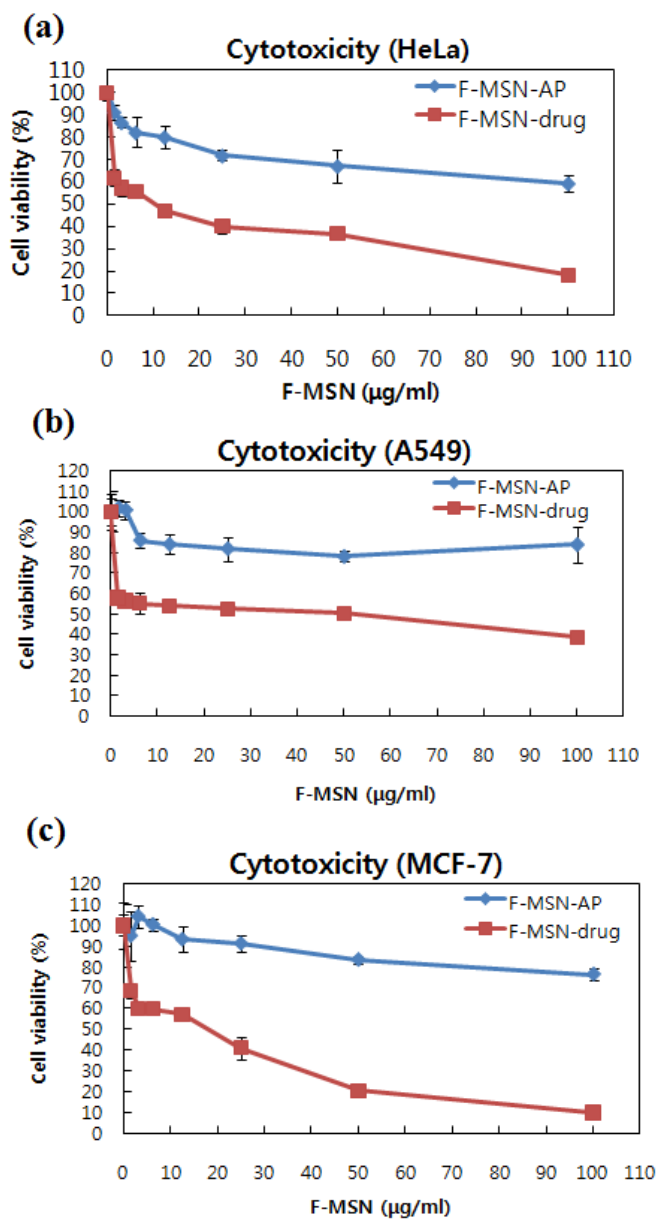


Figure S5. Relative cytotoxicity of (a) HeLa, (b) A549, and (c) MCF-7 cell lines treated with various concentrations of F-MSN-AP and F-MSN-drug.