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†Electronic Supplementary Information

Liquid crystalline nanoparticles encapsulating cisplatin and docetaxel combination for targeted therapy of breast cancer

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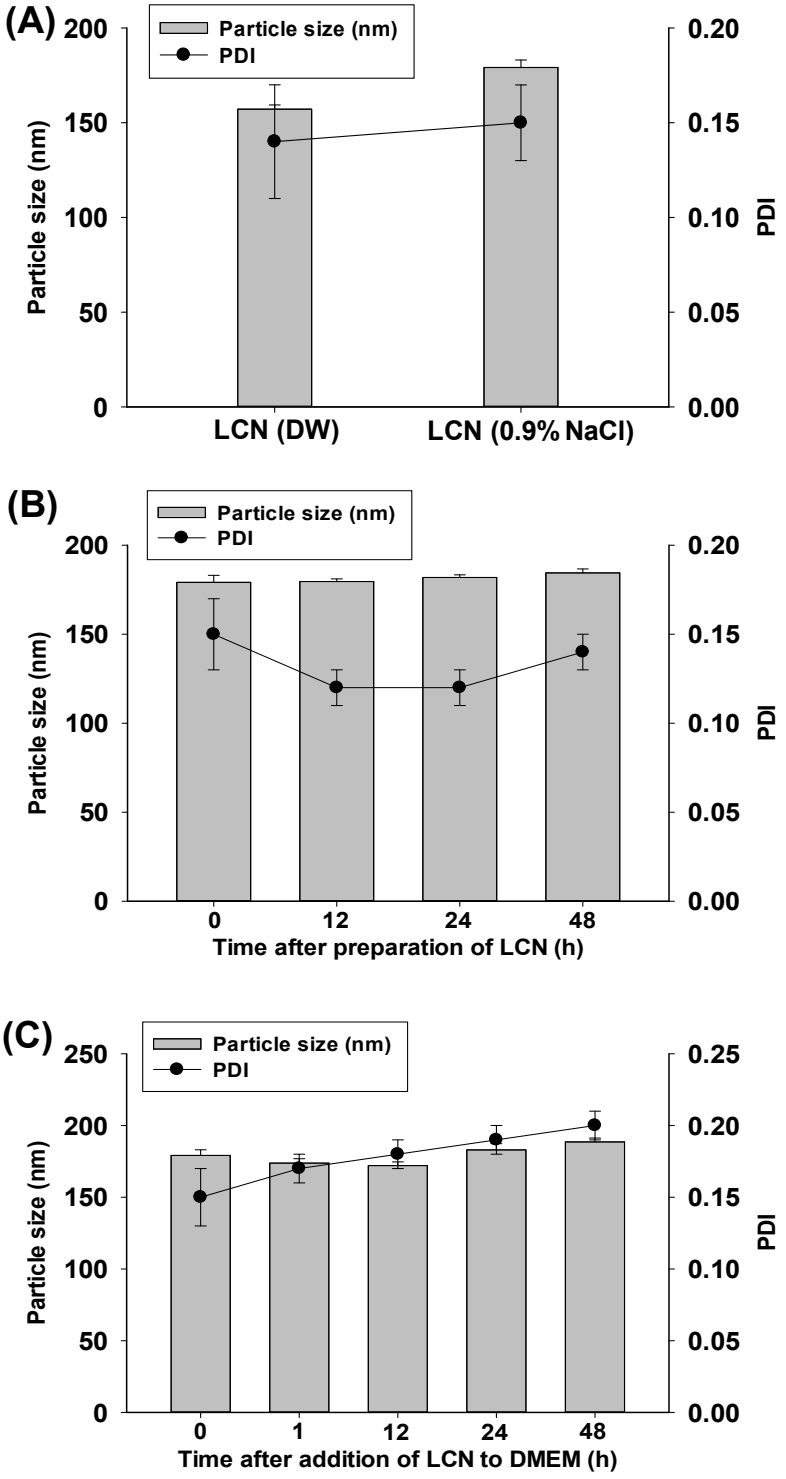

Fig. S1 (A) Effect of 0.9% NaCl solution on the particle size and PDI of LCN; (B) storage stability of the LCN prepared using 0.9% NaCl solution; and (C) effect of DMEM on particle size and PDI of LCN.

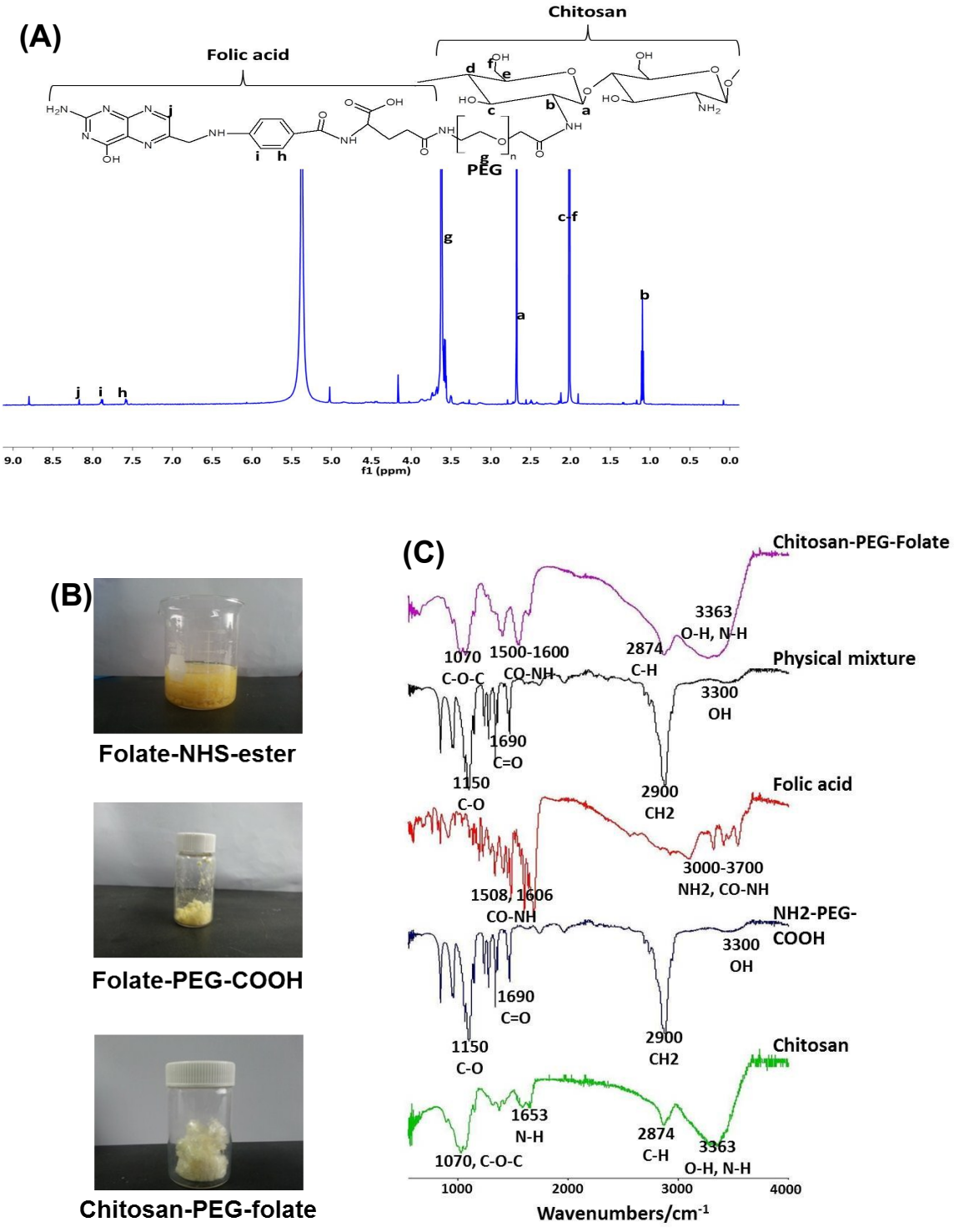

Fig. S2 (A) ^{1}H-NMR spectra of Chi-PEG-FA conjugate; (B) Digital images of prepared intermediates and final conjugate; and (C) FTIR analysis of Chi, NH2-PEG-COOH, FA, and Chi-PEG-FA.

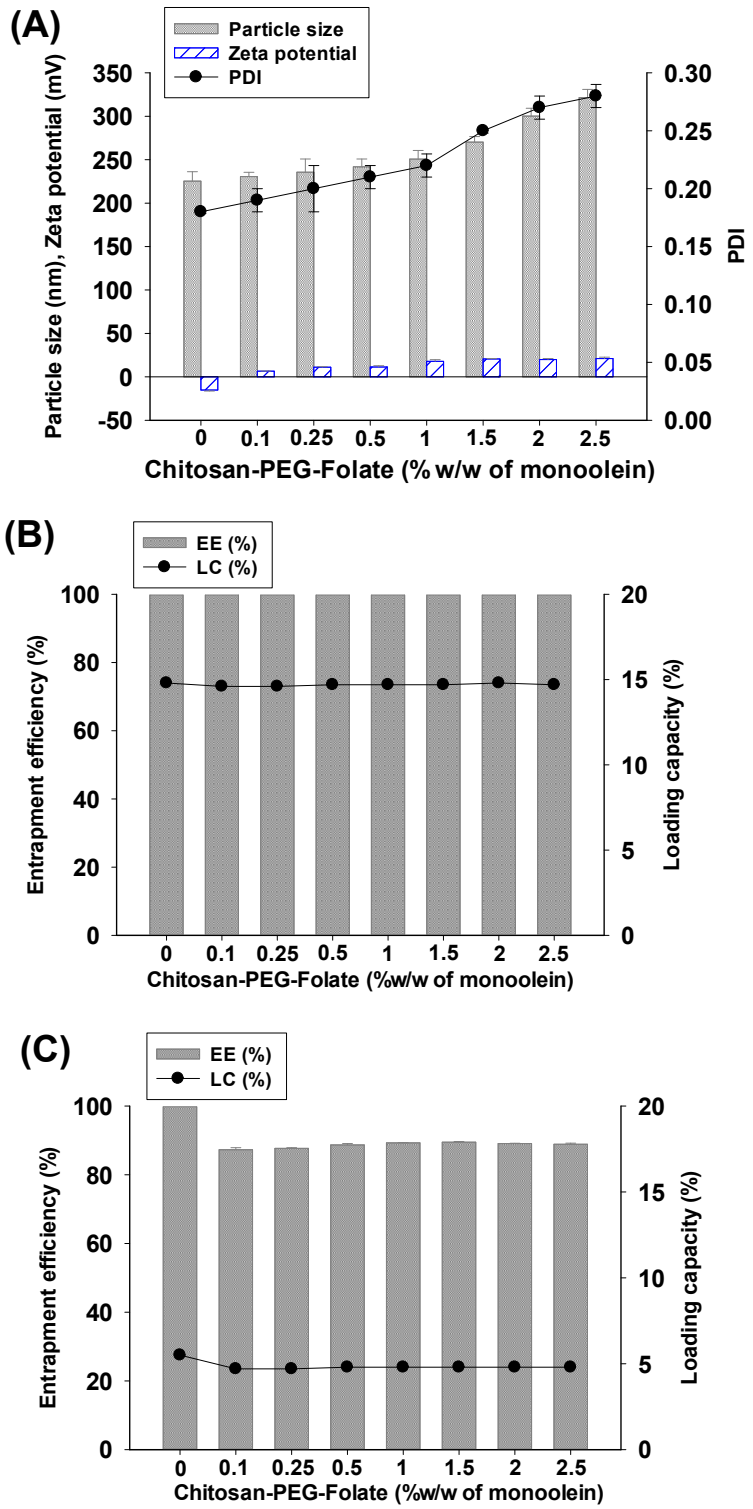

Fig. S3 Effect of Chi-PEG-FA layering on (A) particle size, PDI and zeta potential of LCN/DC; entrapment efficiency and loading capacity of (B) DOC and (C) CIS.

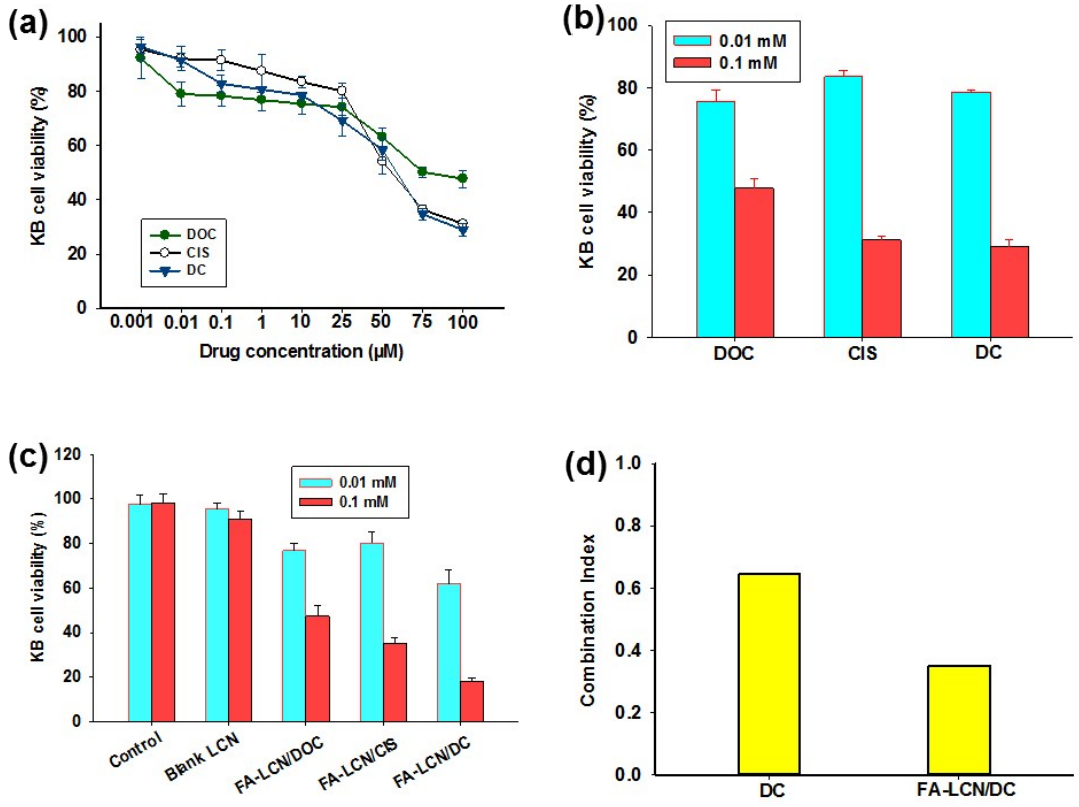

Fig. S4 (a, b) *In vitro* cell cytotoxicity of DOC, CIS, DC cocktail (DOC:CIS molar ratio 1:1) in KB cells. (c) *In vitro* cell cytotoxicity of blank LCN, FA-LCN/DOC, FA-LCN/CIS and FA-LCN/DC at concentrations of 0.01 and 0.1 mM/ml. (d) Combination index for DC cocktail and FA-LCN/DC. Data are expressed as the mean ± SD (n = 8).

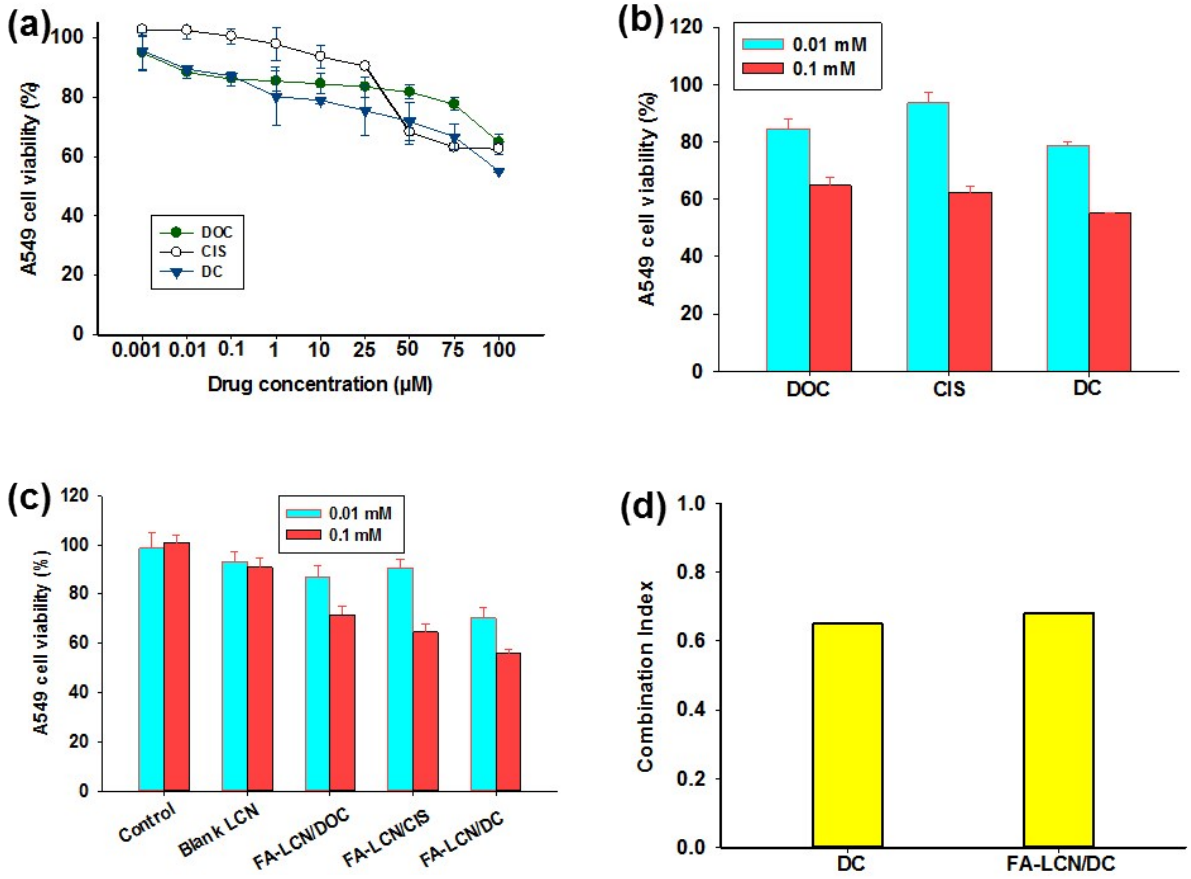

Fig. S5 (a, b) *In vitro* cell cytotoxicity of DOC, CIS, DC cocktail (DOC:CIS molar ratio 1:1) in A549 cells. (c) *In vitro* cell cytotoxicity of blank LCN, FA-LCN/DOC, FA-LCN/CIS and FA-LCN/DC at concentrations of 0.01 and 0.1 mM/ml. (d) Combination index for DC cocktail and FA-LCN/DC. Data are expressed as the mean ± SD (n = 8).

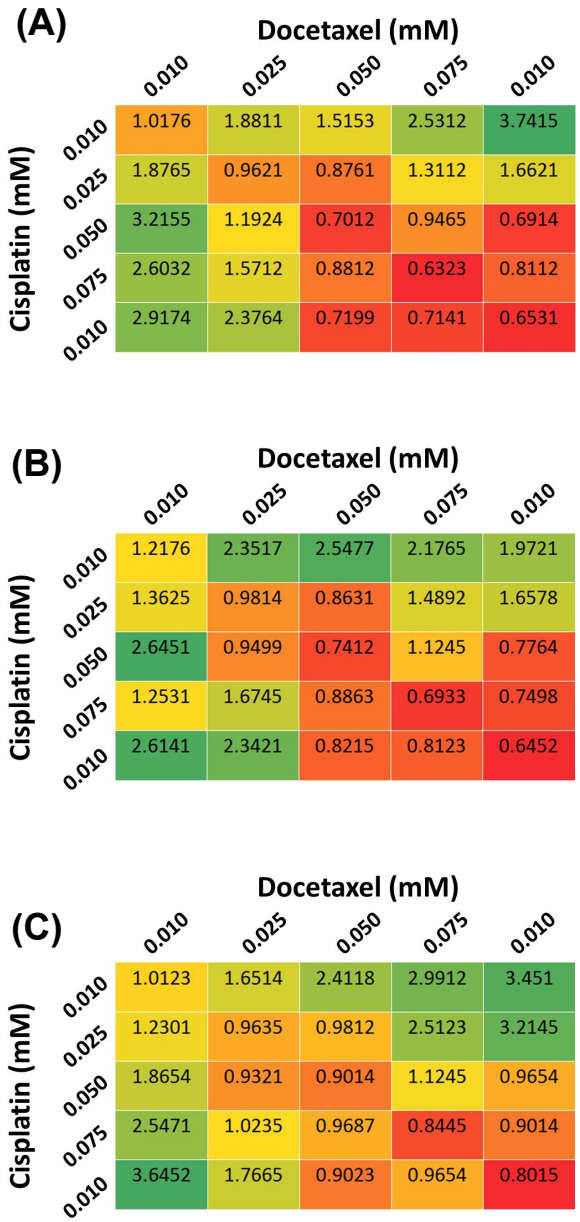

Fig. S6 Heat map of the combination index (CI) for each combination of DOC and CIS in (A) KB, (B) A549 and (C) MDA-MB-231 cells.