

Supporting Information

for

Development and *In Vitro* Evaluation of Ursolic Acid-Loaded Poly(lactic-co-glycolic acid) Nanoparticles in Cholangiocarcinoma

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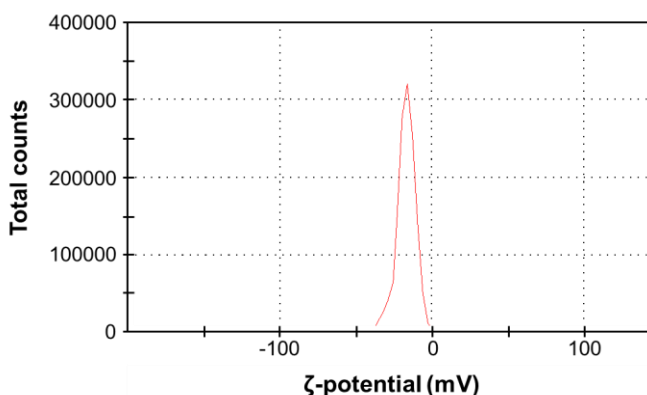


Fig. S1 The ζ -potential distribution of UA-PLGA NPs.

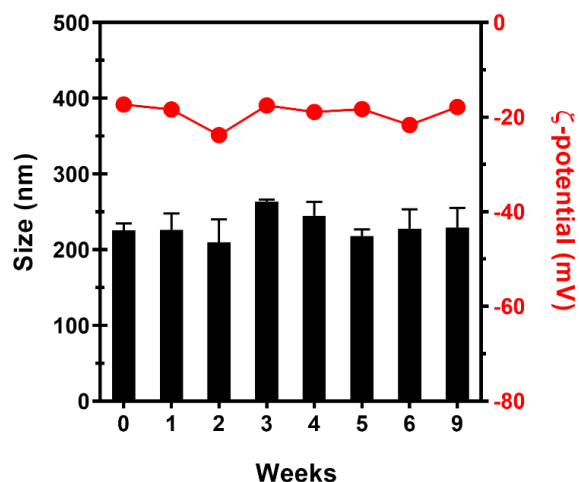


Fig. S2 Evaluation of hydrodynamic diameter (Dh) and ζ -potential stability of UA-PLGA NPs stored at 4 °C in DI water over a duration of 9 weeks.

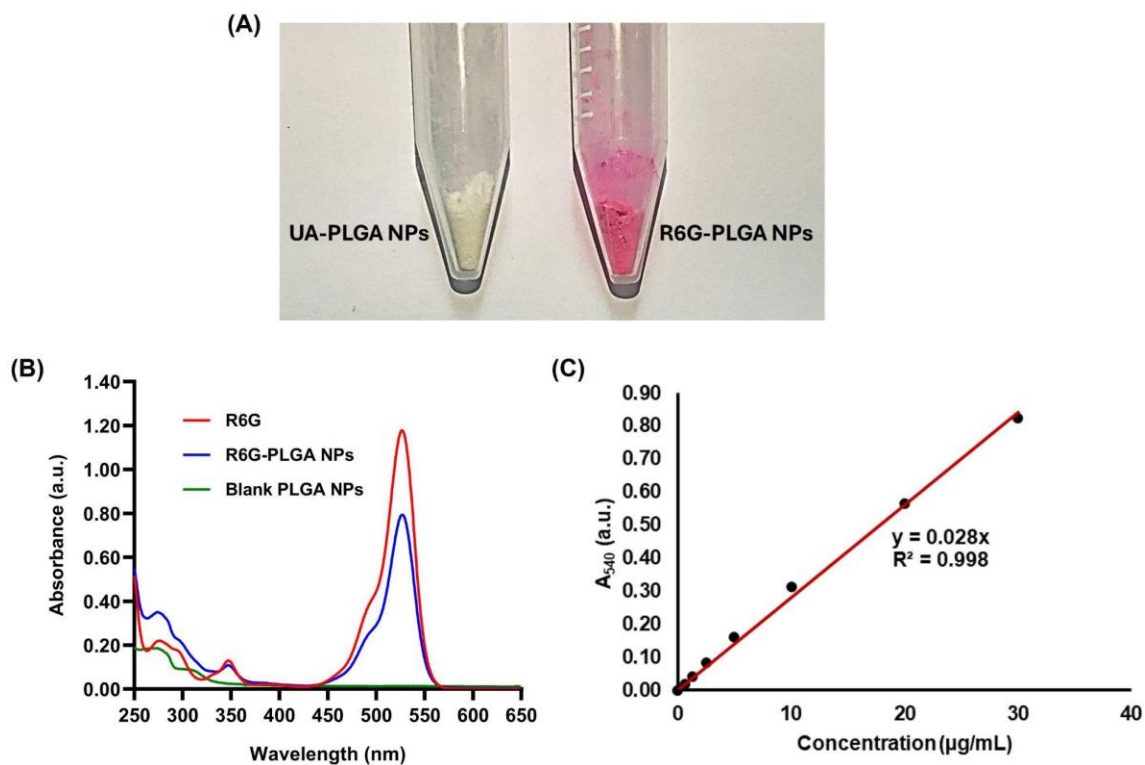


Fig. S3 Characterization of R6G-PLGA NPs. (A) Photographs of freeze-dried UA-PLGA NPs and R6G-PLGA NPs; (B) Absorption spectra of R6G-PLGA NPs, free R6G and blank PLGA NPs; (C) A standard curve of R6G was used to determine R6G content in the R6G-PLGA NPs.

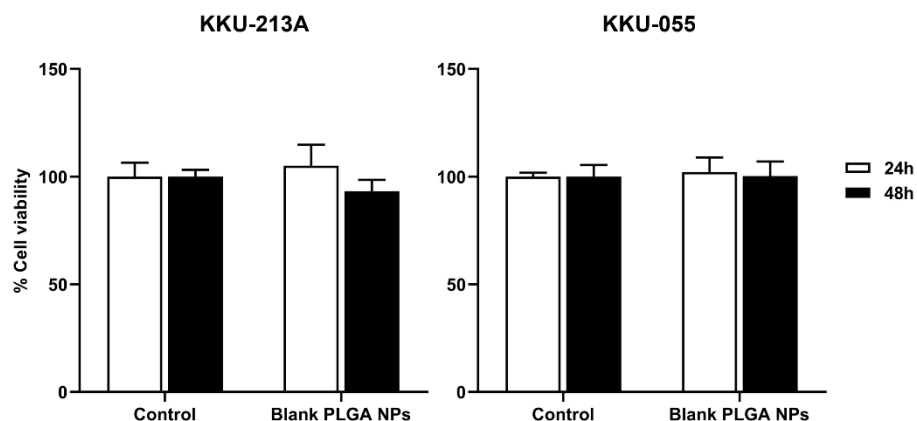


Fig. S4 Assessment of biocompatibility of blank PLGA NPs at the concentration of 1 mg/mL in KKU-213A and KKU-055 CCA cells at 24 and 48 h.

Table S1 UA content in UA-PLGA NPs determined by HPLC using a standard curve.

UA-PLGA NPs ($\mu\text{g/mL}$)	UA in UA-PLGA NPs ($\mu\text{g/mL}$)
0	0
100	11
500	56
1000	111
2000	223

Table S2 IC_{50} values of free UA, UA-PLGA NPs, and encapsulated UA.

IC_{50} ($\mu\text{g/mL}$)	Free UA		UA-PLGA NPs		UA in UA-PLGA NPs	
	24h	48h	24h	48h	24h	48h
KKU-213A	12.7	8.4	786.0	737.4	87.6	82.2
KKU-055	10.4	10.0	587.0	539.7	65.4	60.1

NOTE: IC_{50} ; The half-maximal inhibitory concentration