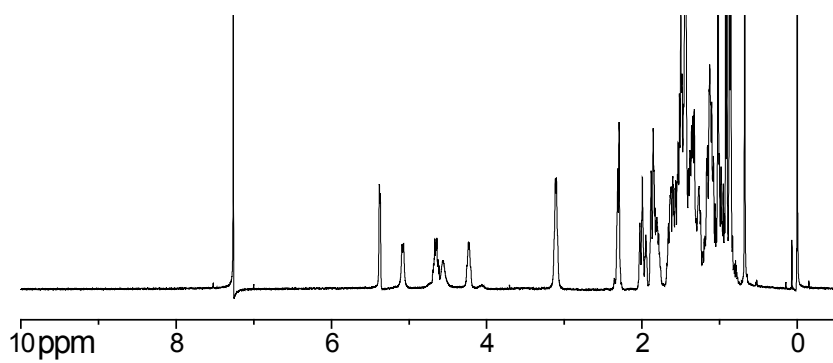
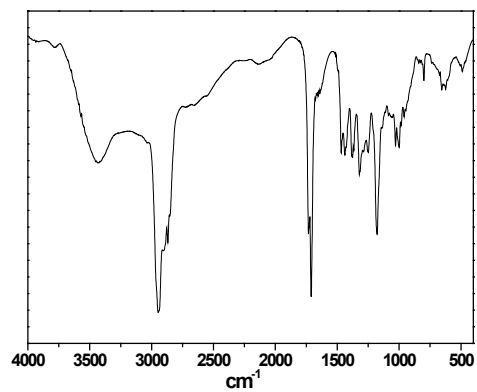
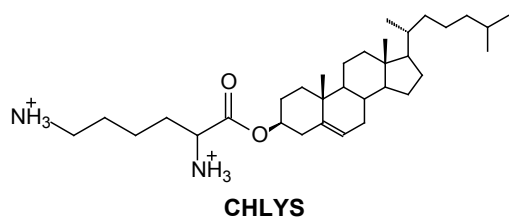
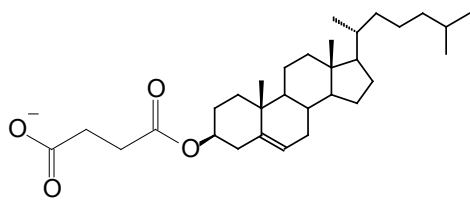


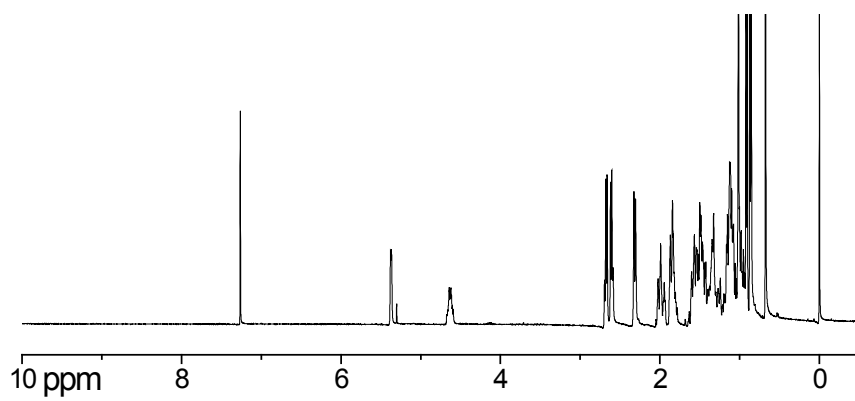
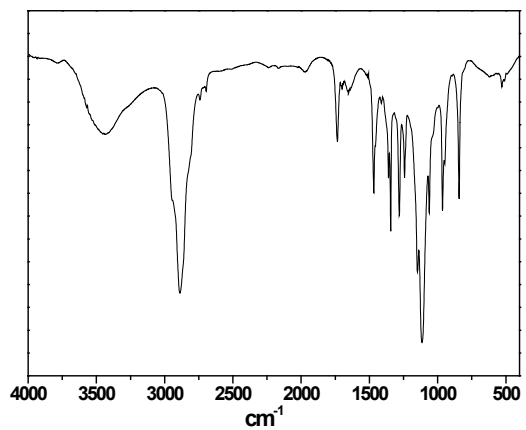
Supplementary Material



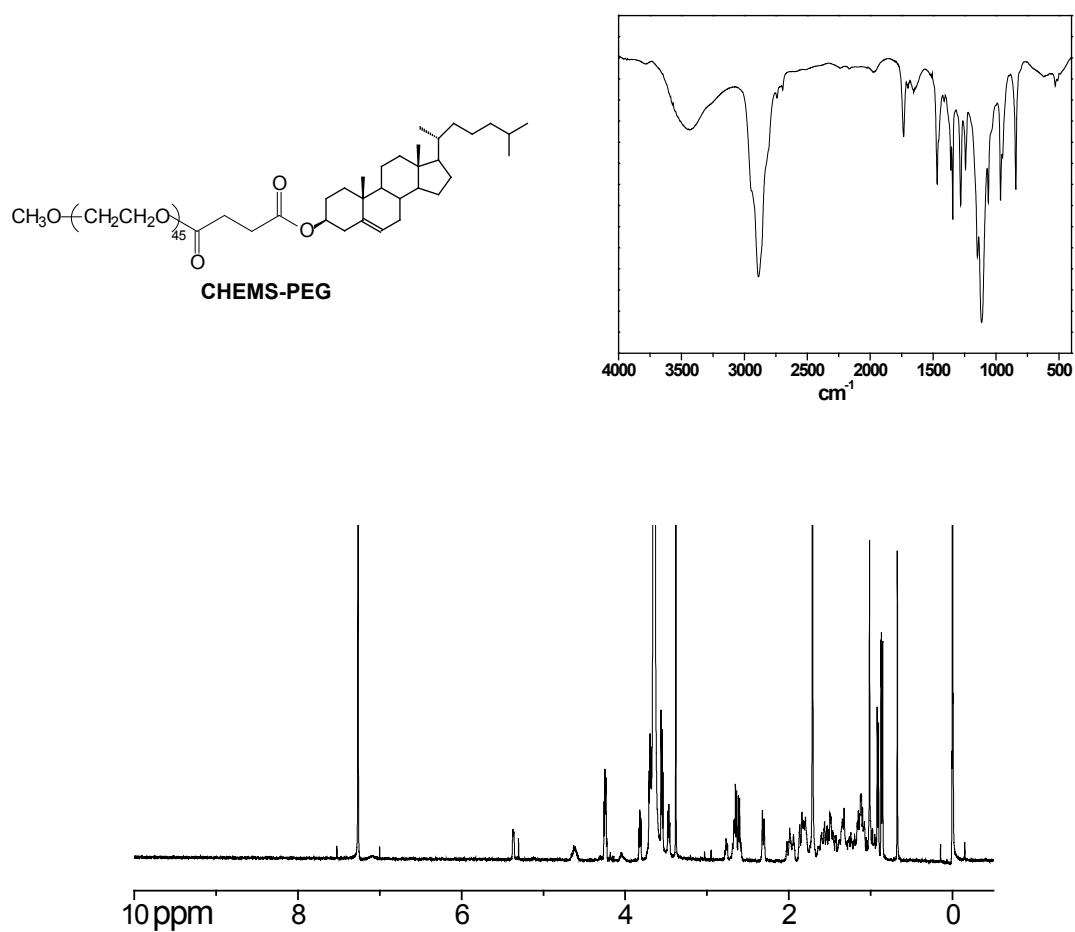
A



CHEMS



B



C

Figure S1. Detection chemical structure of cholesterol derivatives. (A) IR and ¹H-NMR of lysine based cholesterol (CHLYS), (B) IR and ¹H-NMR of cholesterol hemisuccinate (CHEMS), (C) IR and ¹H-NMR of PEGylated CHEMS (CHEMS – PEG).

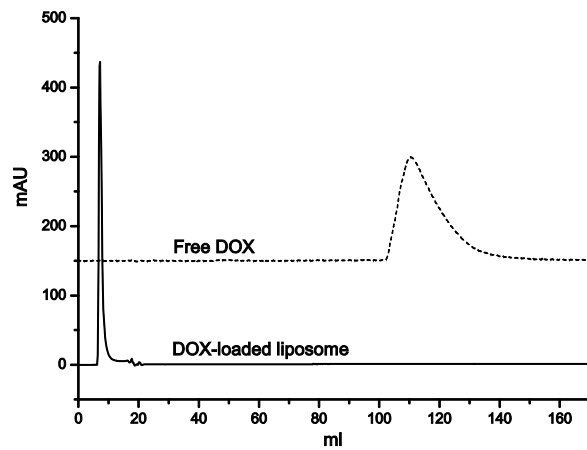


Figure S2. Elution profile on sephadex G-75 column for separating free DOX from DOX-loaded liposome suspension (real line) and free DOX only (broken line) as the contrast.

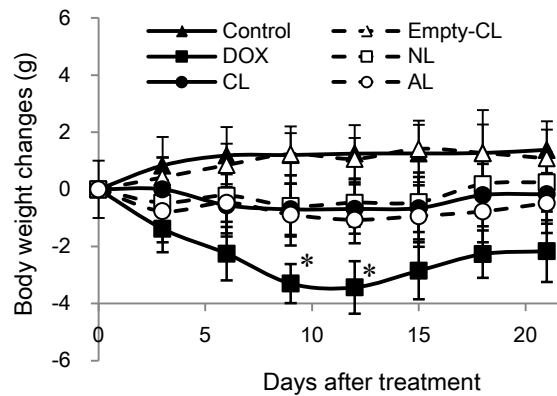


Figure S3. *In vivo* body weight changes after *i.v.* injection of different DOX-loaded PEGylated liposomes with a DOX concentration of 5 mg/kg body weight (n=6, * $p < 0.05$ vs control and other liposomes group) (NL: PEGylated neutral liposome, CL: PEGylated cationic liposome and AL: PEGylated anionic liposome)