

Supplementary information:

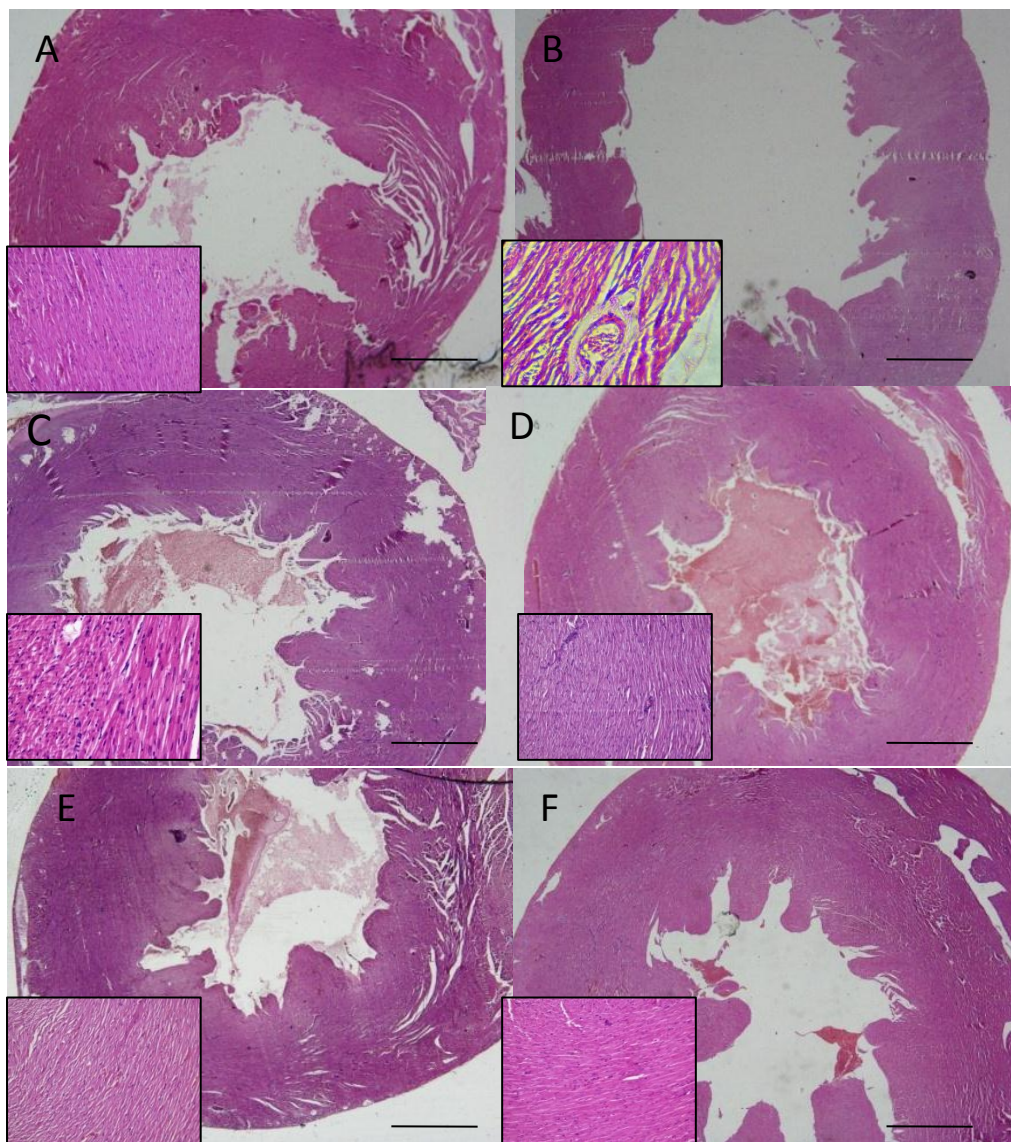


Figure S1: Histopathological examination of whole heart after treatment with different formulations (A) Control, (B) Dox *i.v.*, (C) Lipodox *i.v.*, (D) Dox-NPs (E) Dox-NPs + free CoQ10 and (F) Dox-NPs + CoQ10 NPs (original magnification X 50). The inset image in each section represents histopathological changes at the tissue level after treatment with the same formulations (original magnification X 500).

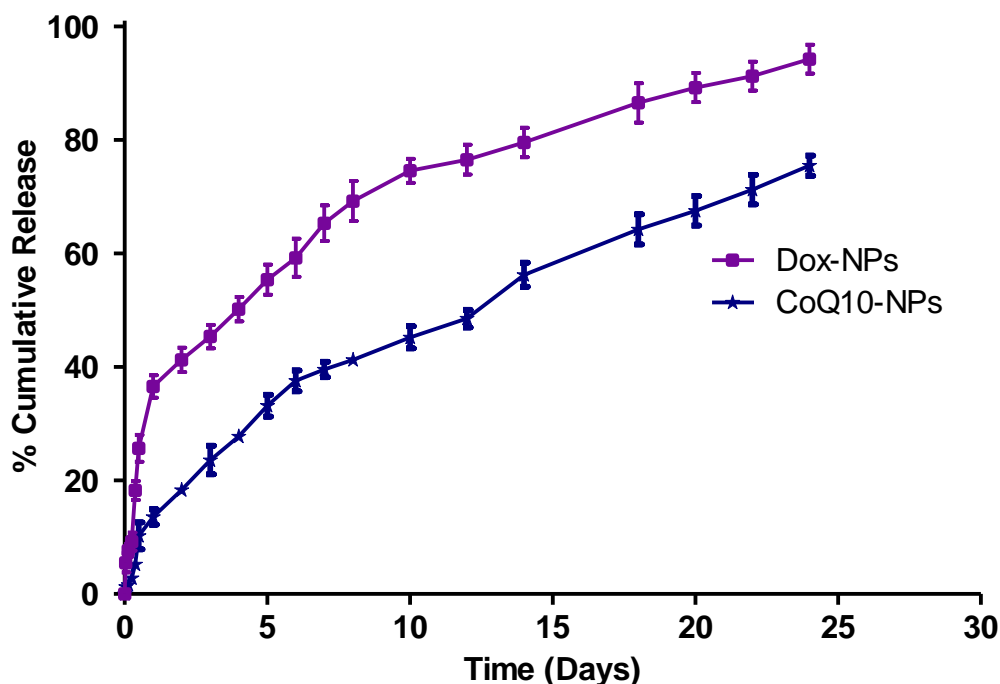


Figure S2. *In vitro* release profile of Dox and CoQ10 from their NPs.

In the release study, dissolution medium PBS (pH 7.4) and 5 % w/w Cremophor EL PBS solution (pH 7.4) was used for Dox-NPs and CoQ10-NPs formulation, respectively.

Data point are expressed as mean \pm SD (n=6)

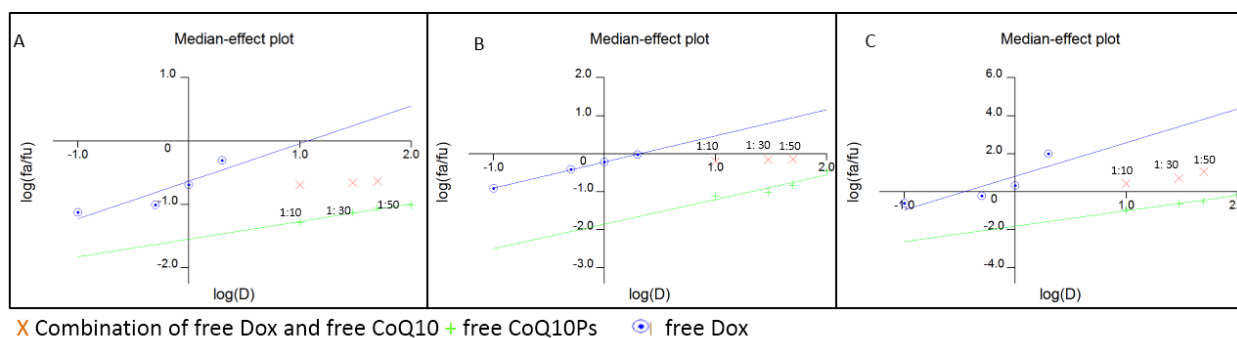


Figure S3: Median-effect plots for free CoQ10, free Dox and their combination upon incubating with MCF-7 cell lines at different concentrations for 24 h (A), 48 h (B), 72 h (C). Values of 1:10, 1:30 and 1:50 represents weight ratio of Dox and CoQ10, respectively when used in combination.

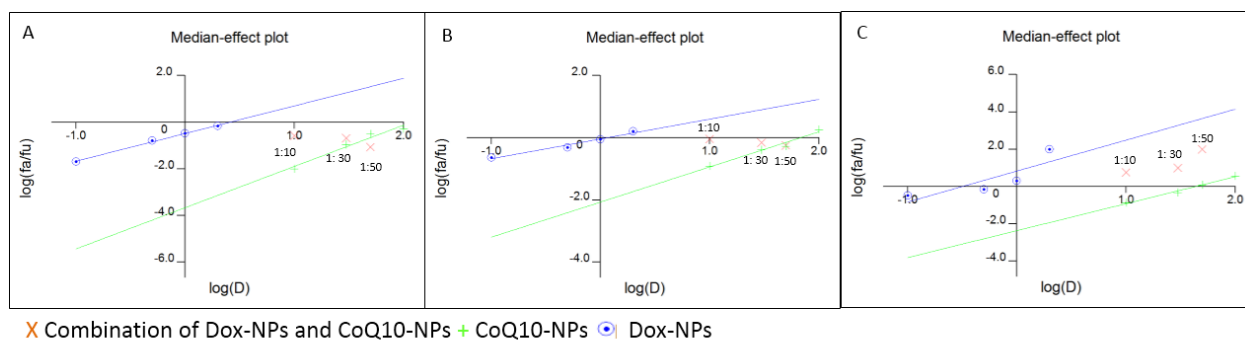


Figure S4: Median-effect plots for CoQ10 NPs, Dox-NPs and their combination upon incubating with MCF-7 cell lines at different concentrations for 24 h (A), 48 h (B), 72 h (C). Values of 1:10, 1:30 and 1:50 represents weight ratio of Dox and CoQ10, respectively when used in combination.