## **Electronic Supporting Information**

## 'Dual-hit' metabolic modulator LDCA synergistically potentiates Doxorubicin to selectively combat cancer associated hallmarks

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Supplementary Fig. S1. The combination Index (CI) value calculated represents strong synergism of Doxorubicin and LDCA. CI value was calculated by Chou–Talalay method using Calcusyn software.



Supplementary Fig. S2. Comparative quantification representing cleaved casp 9/ 3 and PARP levels in vehicle control and 500 nM Doxorubicin and 20  $\mu$ M LDCA combination treated sets. \*\*p < 0.01.

Error bars represent mean ± SD.



Supplementary Fig. S3. Outline of the dosing schedule used in B16-F10 mouse syngeneic melanoma model.



Supplementary Fig. S4. Effect of 1 mg/kg Doxorubicin and 2 mg/kg LDCA combination treatment on tumor associated neo-vasculature formation. Graph represents quantification of lectin signal intensity in vehicle control and Doxorubicin and LDCA combination treated sets. \*\*p < 0.01.

Error bars represent mean ± SD.



Supplementary Fig. S5. Effect of combination treatment on tumor associated micro vasculature formation. Graph represents quantification of CD 31 signal intensity. \*\*p < 0.01. Error bars represent mean ± SD.



Supplementary Fig. S6. Representative CLSM images of freshly resected B16-F10 tumors from combination treated sets exhibits degenerated mitochondrial membrane potential compare to that of vehicle control. Graph represents red:green fluorescence intensity ratio. \*\*p < 0.01. Error bars represent mean ± SD.



Supplementary Fig. S7. Representative CLSM images of B16-F10 tumor section portraying increased level of cleaved caspase 9/ 3 and PARP.