

Supplementary Information

Figure S1. Melittin induces apoptosis in CRC cells by activating the caspase cascade. (A). The expression levels of Caspase 3, Cleaved-caspase 3, Caspase 7, Cleaved-caspase 7, and Caspase 9 in HCT116 cells; (B). The expression levels of Caspase 3, Cleaved-caspase 3, Caspase 7, Cleaved-caspase 7, and Caspase 9 in HT29 cells. Statistical significance: *, $p < 0.05$, **, $p < 0.01$, ***, $p < 0.001$.

A

HCT116

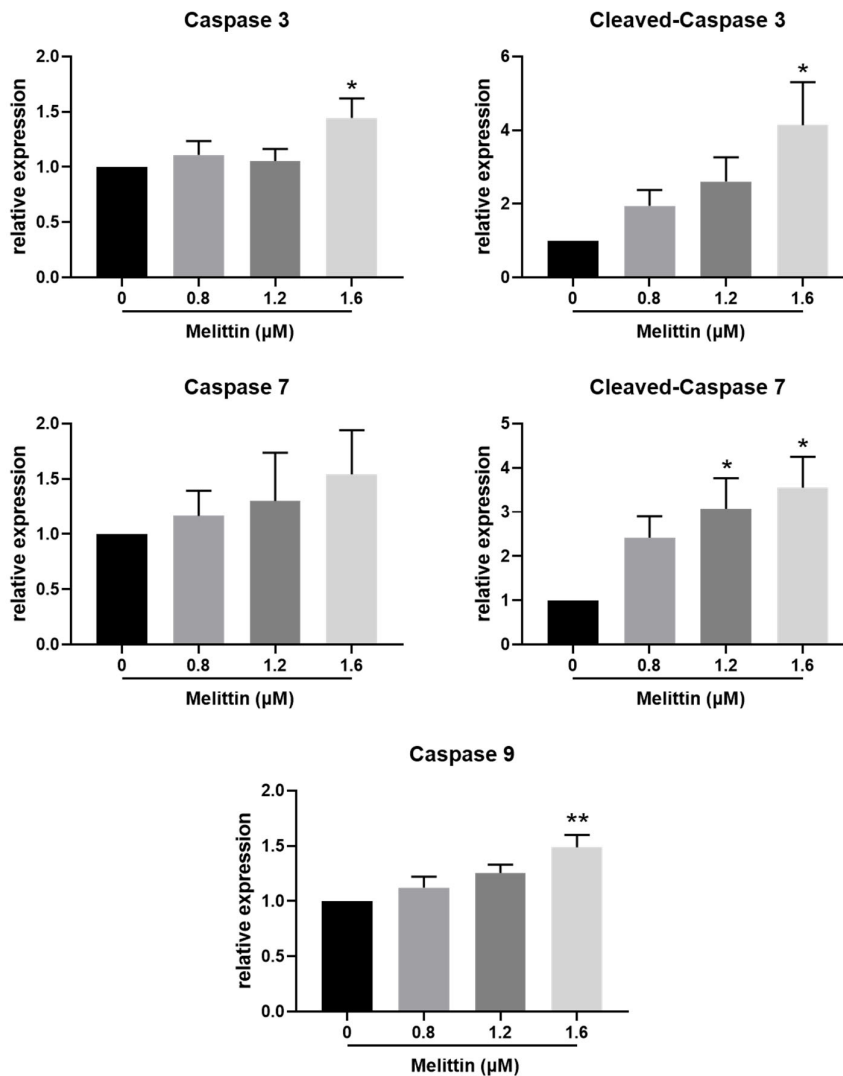


Figure S1. continued

B

HT29

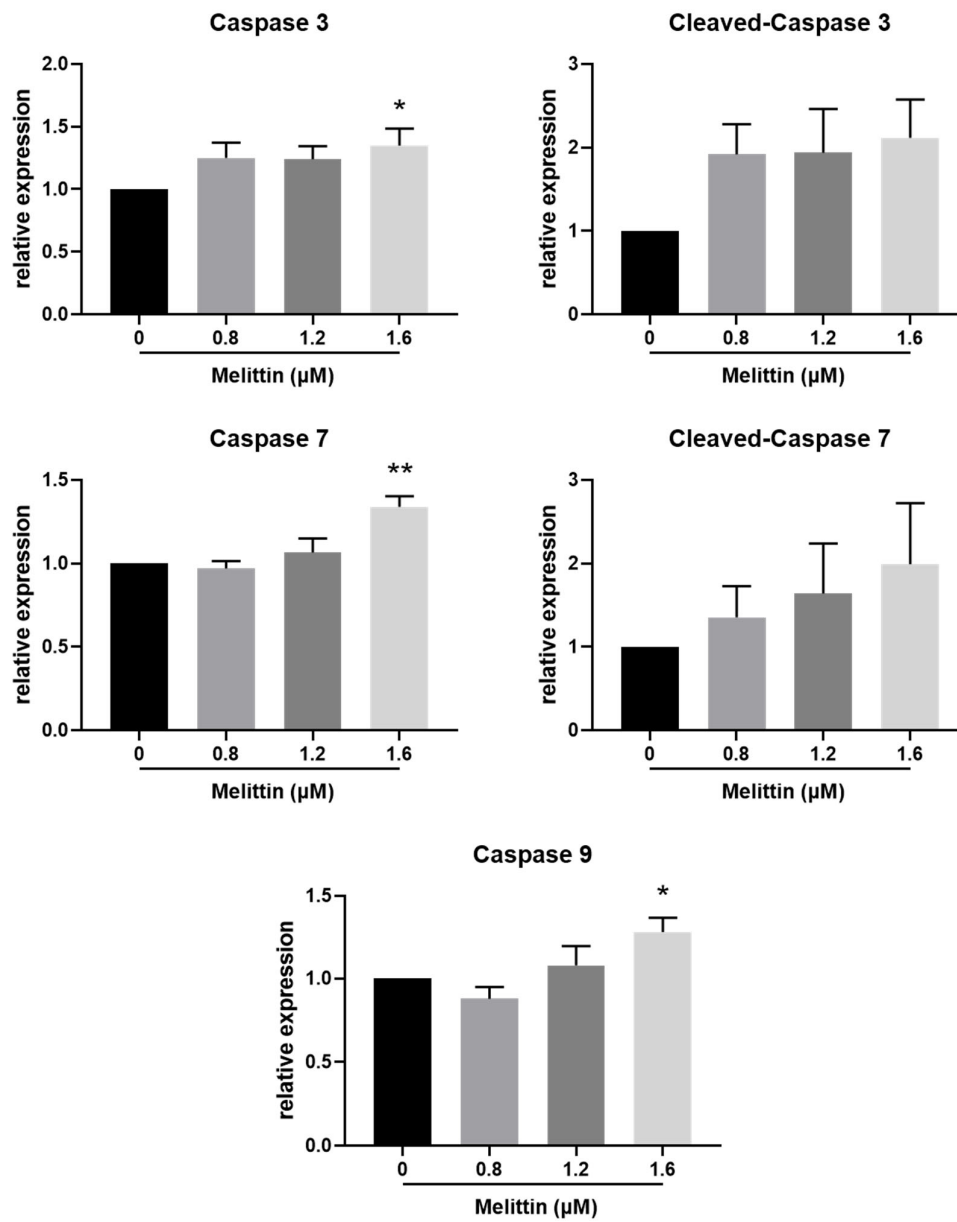


Figure S2. Melittin suppresses tumor growth in a subcutaneous heterograft tumor model using BALB/c nude mice. After treatment with melittin, the tumor volume in mice significantly decreased, with a more pronounced effect in the high-dose (2 mg/kg Melittin) group.

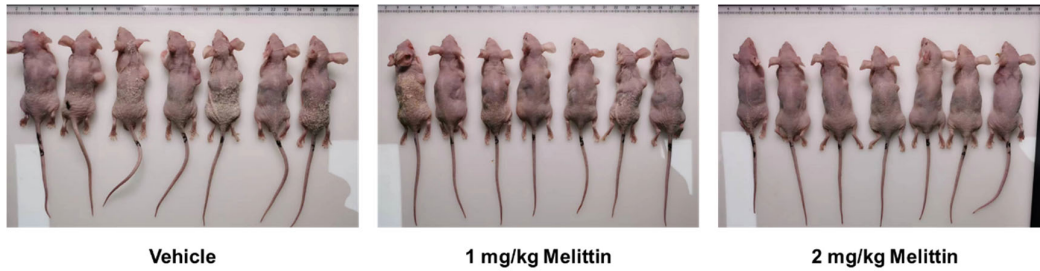


Figure S3. Melittin induces mitochondrial pathway-mediated apoptosis *in vitro*. (A). The expression levels of Bax, Bcl-2, Cytochrome C, AIF, Endo G, Smac/Diablo in HCT116 cells; (B). The expression levels of Bax, Bcl-2, Cytochrome C, AIF, Endo G, Smac/Diablo in HT29 cells. Statistical significance: *, $p < 0.05$, **, $p < 0.01$, ***, $p < 0.001$.

A

HCT116

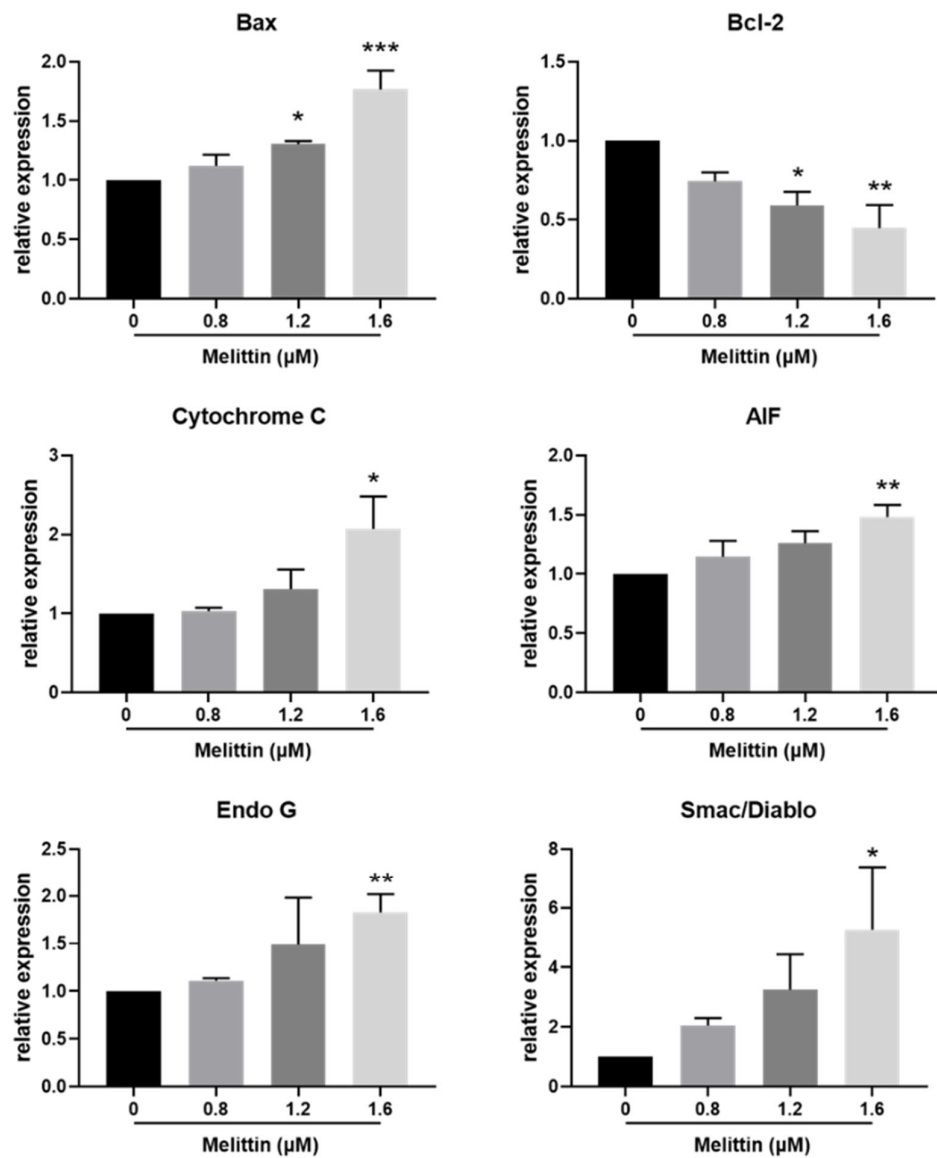


Figure S3. continued

B

HT29

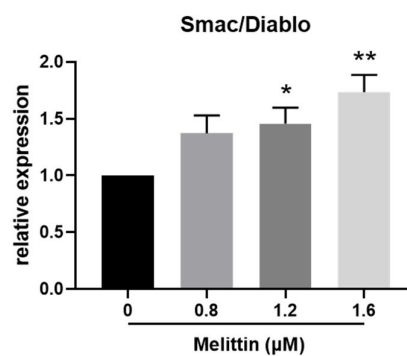
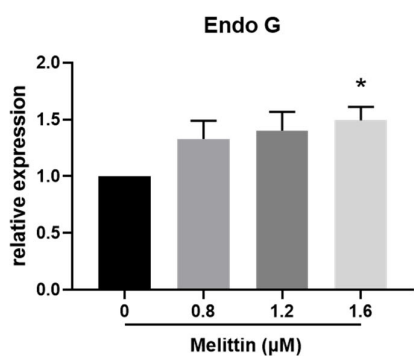
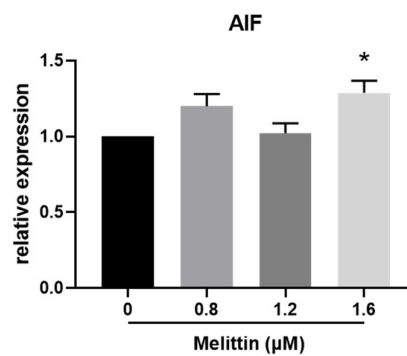
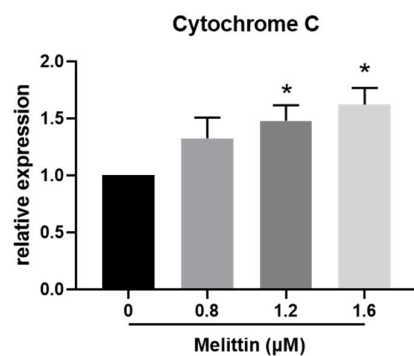
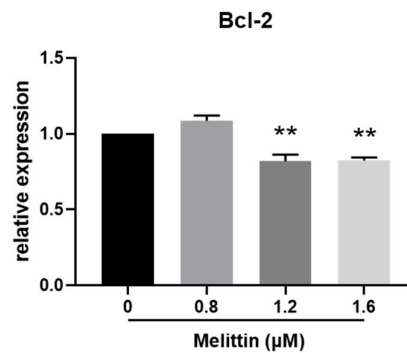
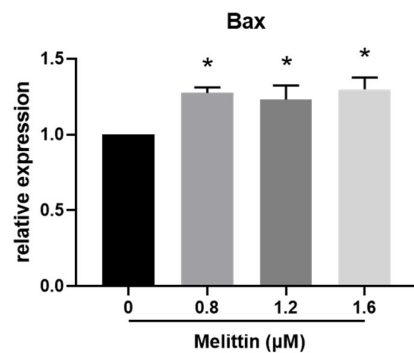


Figure S4. Melittin reverses EMT by inhibiting the β -catenin signaling pathway *in vitro*. (A). The expression levels of MMPs and EMT-related proteins in HCT116 cells; (B). The expression levels of MMPs and EMT-related proteins in HT29 cells. Statistical significance: *, $p < 0.05$, **, $p < 0.01$, ***, $p < 0.001$.

A

HCT116

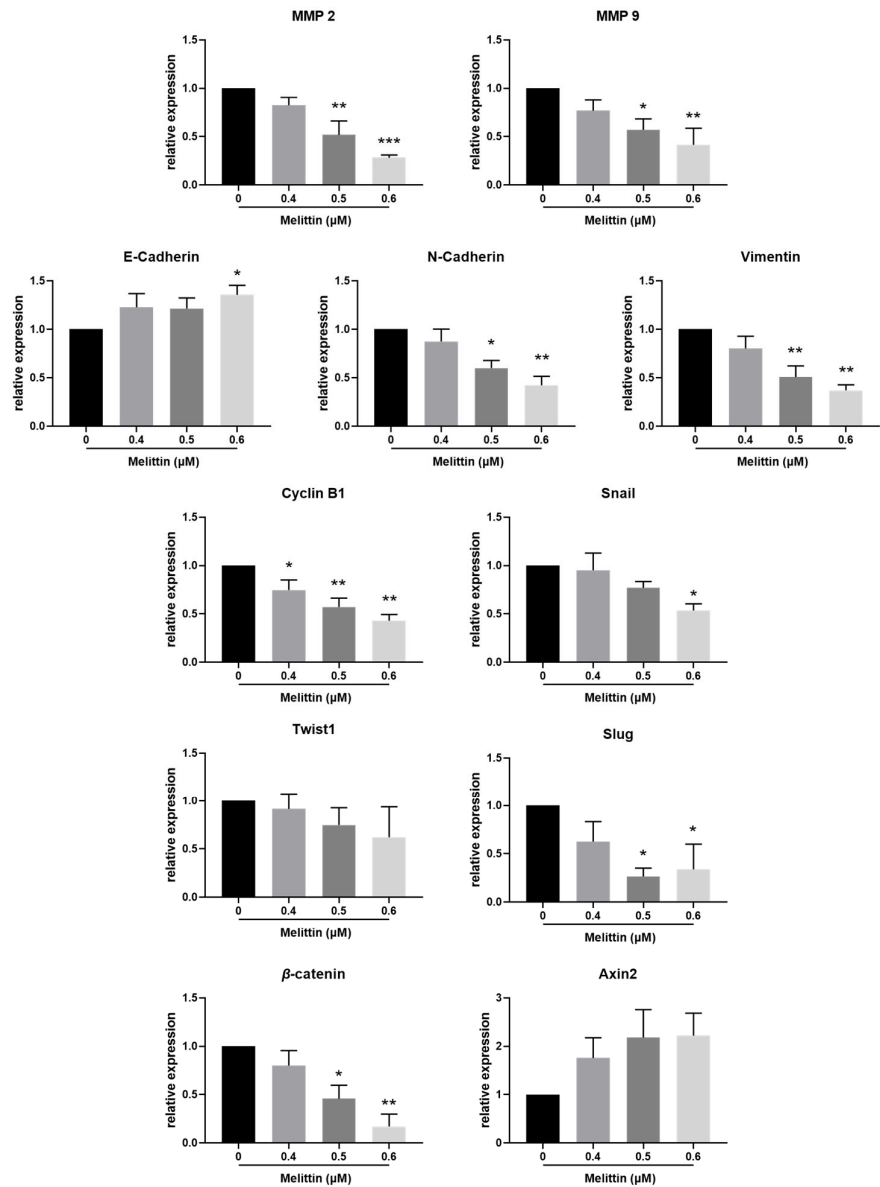


Figure S4. continued

B

HT29

