Supplementary Material

3-Hydroxy-β-Ionone suppresses breast cancer progression by inducing apoptosis and blocking EMT through the TGF-β/Smad signaling pathway

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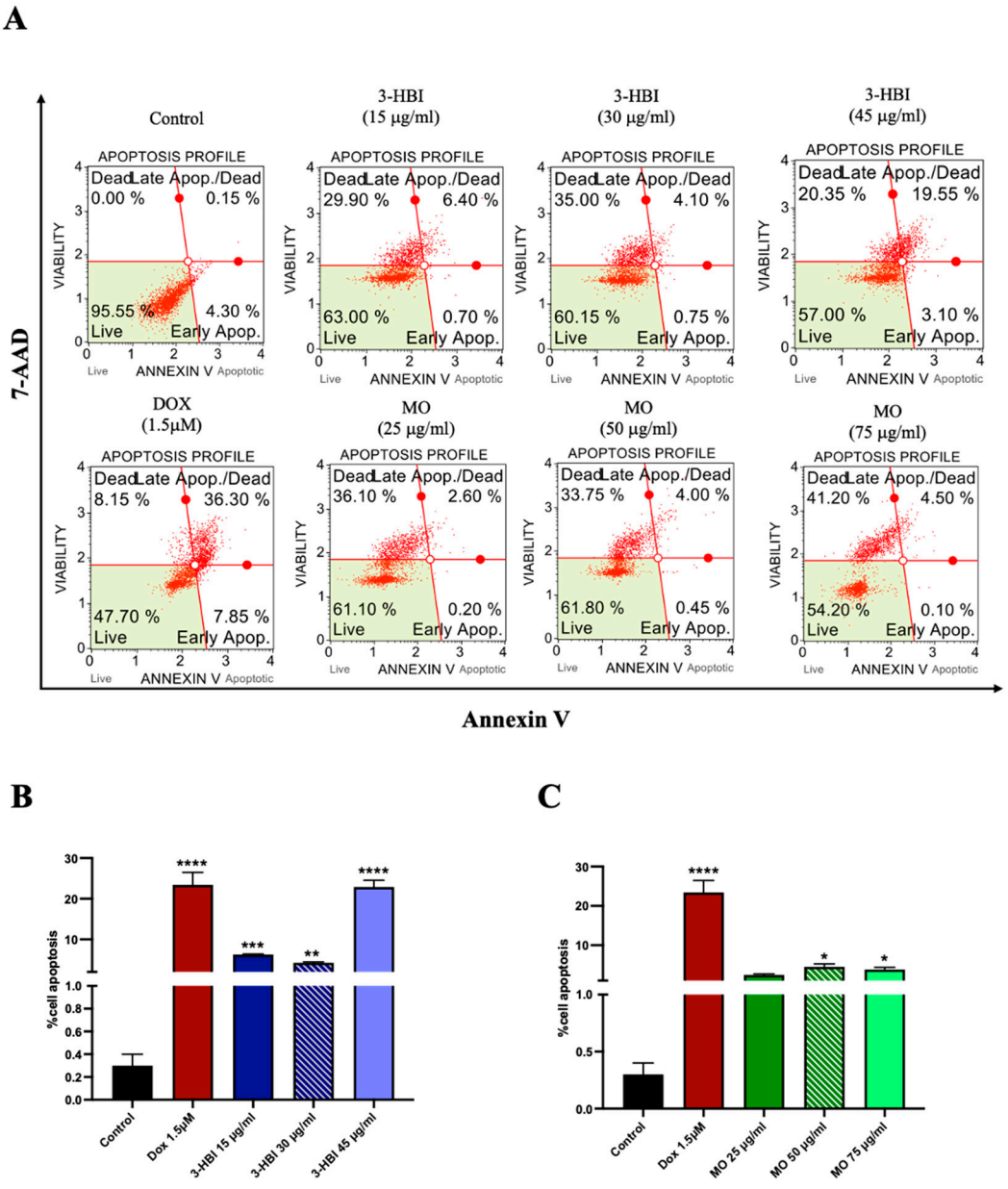


Figure S1. The apoptosis of the T47D cell line was analyzed using a Muse cell analyzer. (A) T47D apoptosis profiles. Bar graphs of T47D apoptosis, (B) 3-HBI treatment groups (C) MO treatment groups. Data are presented as means ± SEM. * $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$, and **** $p \leq 0.0001$ compared to control. Control: untreated T47D; 3-HBI: 3-hydroxy-β-ionone; MO: *Moringa oleifera* Lam.

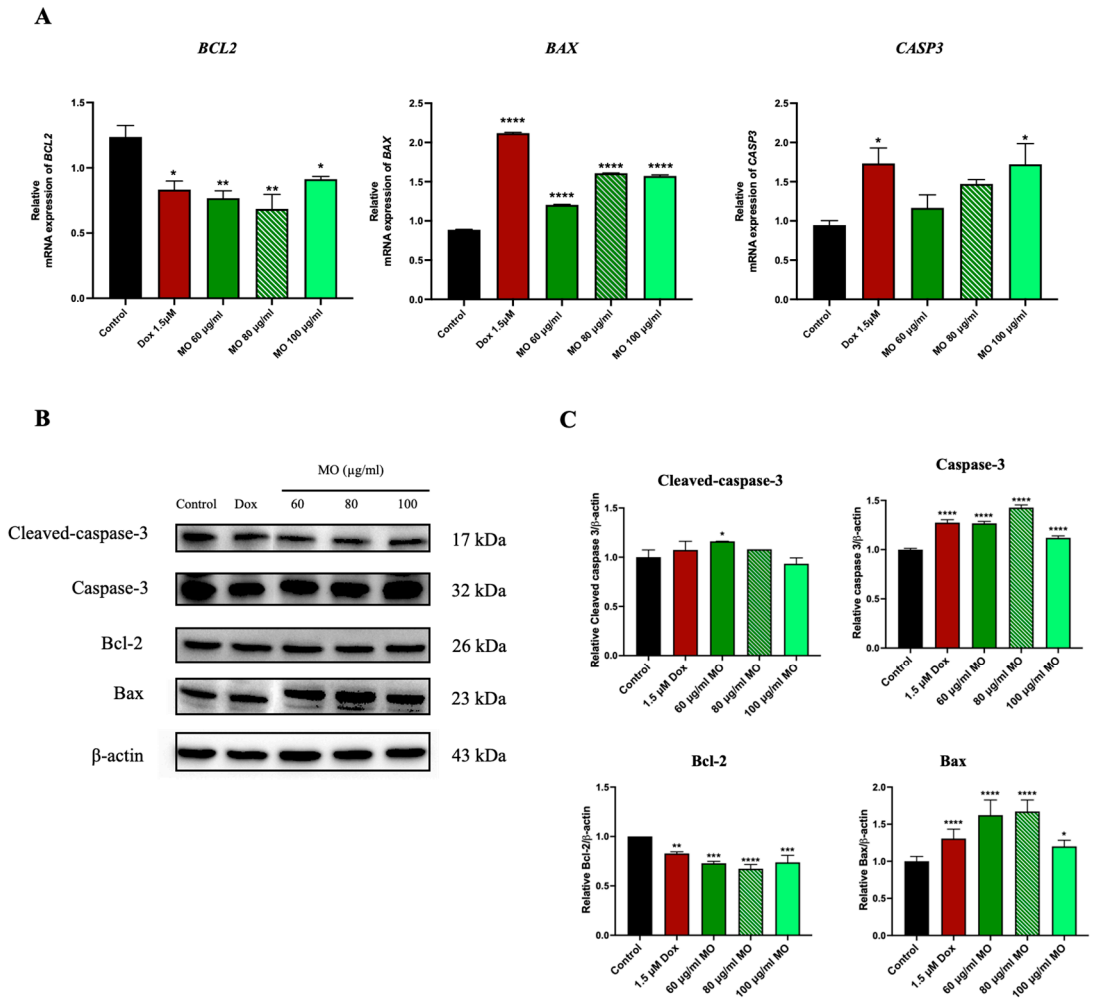


Figure S2. Effect of MO on apoptotic gene and protein expression (A) The expression of *BCL2*, *BAX*, and *CASP3* genes of the 3-HBI treatment groups. (B) Apoptosis proteins expression and (C) Bar graphs of apoptosis proteins. Data are presented as means ± SEM. * $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$, and **** $p \leq 0.0001$ compared to control. Control: untreated MDA-MB-231; MO: *Moringa oleifera* Lam.

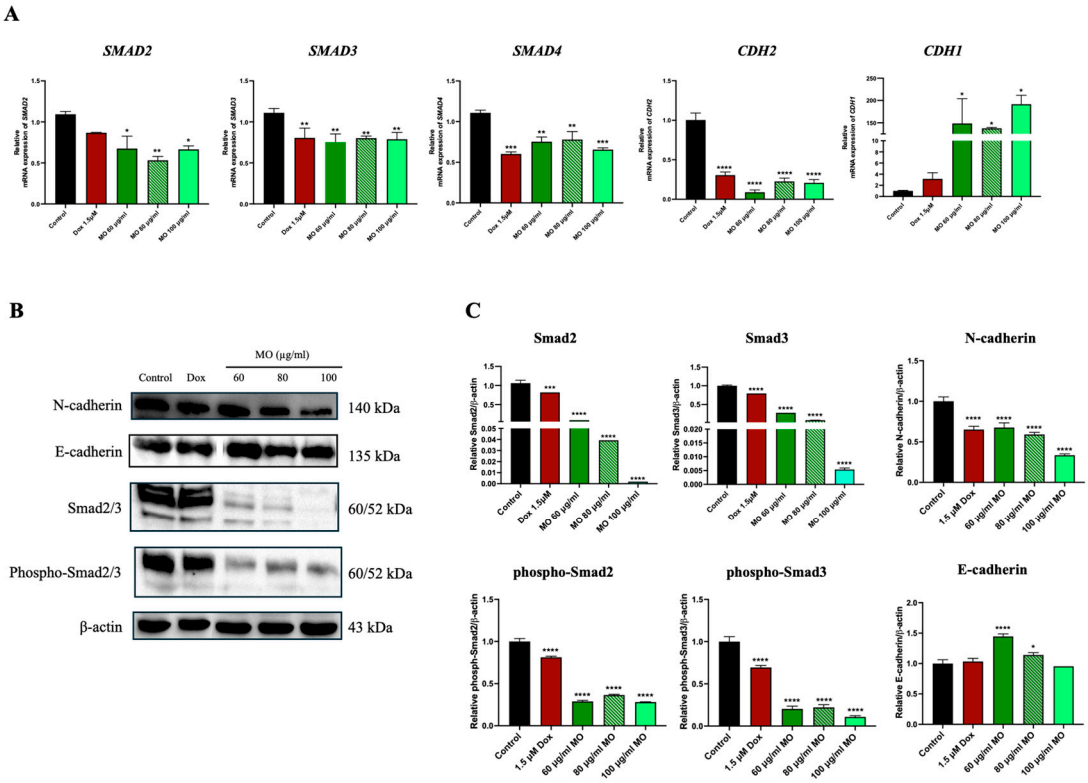


Figure S3. Effect of MO on TGF-β/Smad pathway-related gene and protein expression. (A) The expression of SMAD2, SMAD3, SMAD4, CDH2 and CDH1 genes in MO treatment groups. (B) N-cadherin, E-cadherin, Smad2/3 and phospho-Smad2/3 expression and (C) Bar graphs of proteins. Data are presented as means ± SEM. * $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$, and **** $p \leq 0.0001$ compared to control. Control: untreated MDA-MB-231; MO: *Moringa oleifera* Lam.