**Supplementary Data**



**Supplementary figure 1.** **THB exhibits the most potent cytotoxicity to NSCLC cells**

A549 cells were incubated in the presence of Neritaloside or Odoroside H at different concentrations (0, 7.8, 15.6, 31.3, 62.5, 125, 250 or 500 nM) for 24, 48, and 72 h ，respectively. Cell viability was assessed by MTT assay.



**Supplementary figure 2. THB has no significant effect on the cell cycle of human lung cancer cells.**

**A-B.** A549 and H460 cells were treated with THB (0, 30, 60 or 120 nM) for 48 h. The cell cycle phases were analyzed by flow cytometry. Data are means ± SD of at least three independent experiments, NS, non-statistical significance.



**Supplementary figure 3.** **SRC-3 is significantly high expressed in NSCLC cells than in normal lung epithelial cells.**

BEAS-2B, A549 and H460 cells were treated with 120 nM THB for 48 h. The protein levels of SRC-3 were detected by western blot.



**Supplementary figure 4. The inhibitory effect of THB on** **subcutaneous tumor-bearing mice.**

**A-C.** 1 × 106 A549 cells were inoculated in the right flank of nude mice before i.p. injected with digoxin (2 mg / kg), THB (2 mg / kg) or vehicle 3 times a week for 5 weeks. Tumor volumes were assessed at 4 interval days after inoculation. The tumor weights were recorded. **D.** The survival time of tumor-bearing mice in all groups was recorded. MST (median survival time) was calculated (n=5, each). Data are means ± SD of at least three independent experiments. NS, non-statistical significance; \*, *p* <0.05; \*\*, *p* <0.01; \*\*\*, *p* <0.001.