Alisol B

**Cat. No.:** HY-N0805A  
**CAS No.:** 18649-93-9  
**Molecular Formula:** C₃₀H₄₈O₄  
**Molecular Weight:** 472.7  
**Target:** Others  
**Pathway:** Others  
**Storage:** Please store the product under the recommended conditions in the COA.

### BIOLOGICAL ACTIVITY

**Description**

Alisol B is a potentially novel therapeutic compound for bone disorders by targeting the differentiation of osteoclasts as well as their functions. IC50 Value: Target: In vitro: The in vitro cultured human renal tubular epithelial HK-2 cells were intervened with 5 ng/mL transforming growth factor-beta (TGF-beta), 0.1 micromol C3a, and 0.1 micromol C3a + 10 micromol alisol B, respectively. Exogenous C3a could induce renal tubular EMT. Alisol B was capable of suppressing C3a induced EMT [1]. Alisol-B strongly inhibited RANKL-induced osteoclast formation when added during the early stage of cultures, suggesting that alisol-B acts on osteoclast precursors to inhibit RANKL/RANK signaling. Among the RANK signaling pathways, alisol-B inhibited the phosphorylation of JNK, which are upregulated in response to RANKL in bone marrow macrophages, alisol-B also inhibited RANKL-induced expression of NFATc1 and c-Fos, which are key transcription factors for osteoclastogenesis. In addition, alisol-B suppressed the pit-forming activity and disrupted the actin ring formation of mature osteoclasts [2]. Alisol B induced calcium mobilization from internal stores, leading to autophagy through the activation of the CaMKK-AMPK-mammalian target of rapamycin pathway. Moreover, the disruption of calcium homeostasis induces endoplasmic reticulum stress and unfolded protein responses in alisol B-treated cells, leading to apoptotic cell death. Finally, by computational virtual docking analysis and biochemical assays, it was showed that the molecular target of alisol B is the sarcoplasmic/endoplasmic reticulum Ca(2+) ATPase [3].

**REFERENCES**

