**Dehydrocostus Lactone**

**Description**
Dehydrocostus lactone (DHL) is a sesquiterpene lactone originally found in species of *Saussurea*. DHL exhibits antibacterial, antioxidative, anti-angiogenic, anticancer chemotherapeutic, and chemopreventive activities. DHL displays antibacterial activity against species of *Mycobacterium*. In osteoblasts, DHL increases levels of NADPH, thioredoxin reductase, and phospho-CREB and decreases levels of nitrotyrosin, preventing mitochondrial dysfunction induced by antimycin A. In macrophages treated with LPS, DHL decreases expression of iNOS and TNF-α. Additionally, DHL activates cAMP-activated cystic fibrosis transmembrane conductance regulator (CFTR) Cl- channels in thyroid cells. In vitro and in vivo, this compound downregulates expression of cyclin D1, Akt, mTOR, and inhibits phosphorylation of GSK-3β, inducing G0/G1 phase cell cycle arrest and preventing capillary tube formation. In soft tissue sarcoma cell lines, DHL decreases expression of CDK2, p27, CDK1/cdc2, cyclin B1, and matrix metalloproteinases 2 and 9 (MMP2/9), inducing G2/M phase cell cycle arrest and inhibiting cell proliferation.

**References**

**Caution:** This product is intended for laboratory and research use only. It is not for human or drug use.