Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

Costunolide

Catalog No: tcsc1487

Available Sizes

Size: 5mg

Size: 10mg

Specifications

CAS No:
553-21-9

Formula:
$C_{15}H_{20}O_2$

Pathway:
Apoptosis

Target:
Apoptosis

Purity / Grade:
>98%

Solubility:
DMSO : ≥ 49 mg/mL (210.92 mM)

Alternative Names:
(+)-Costunolide; Costus lactone

Observed Molecular Weight:
232.32

Product Description

Costunolide, a sesquiterpene lactone, exhibits anti-inflammatory and anti-oxidant properties and mediates apoptosis.

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IC50 Value: 6.2 - 9.8 ug/mL(sarcoma cells viability)[3]

Target: Apoptosis inducer

in vitro: Costunolide significantly inhibited RANKL-induced BMM differentiation into osteoclasts in a dose-dependent manner without affecting cytotoxicity. Costunolide did not regulate the early signaling pathways of RANKL, including the mitogen-activated protein kinase and NF-κB pathways. However, costunolide suppressed nuclear factor of activated T-cells, cytoplasmic 1 (NFATc1) expression via inhibition of c-Fos transcriptional activity without affecting RANKL-induced c-Fos expression. The inhibitory effects ofcostunolide were rescued by overexpression of constitutively active (CA)-NFATc1 [1]. Exposure of T24 cells to costunolide was also associated with increased expression of Bax, down-regulation of Bcl-2, survivin and significant activation of caspase-3, and its downstream target PARP [2]. Both costunolide and dehydrocostus lactone inhibited cell viability dose- and time-dependently. IC50 values ranged from 6.2 ug/mL to 9.8 ug/mL. Cells treated with costunolide showed no changes in cell cycle, little in caspase 3/7 activity, and low levels of cleaved caspase-3 after 24 and 48 h [3].

in vivo: Neither costunolide nor alpha-MGBL affected the blood-ethanol elevation in pylorus-ligated rats or that induced by intraperitoneal and intraduodenal ethanol administration [4]. Costunolide and alpha-MGBL suppressed gastric emptying in rats given 20% ethanol and 1% sodium carboxymethyl cellulose.

Clinical trial: