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

Osthole

Catalog No: tcsc2125

Available Sizes

Size: 250mg

Size: 1g

Size: 5g

Specifications

CAS No:
484-12-8

Formula:
$C_{15}H_{16}O_3$

Pathway:
Immunology/Inflammation;GPCR/G Protein

Target:
Histamine Receptor;Histamine Receptor

Purity / Grade:
>98%

Solubility:
DMSO : 125 mg/mL (511.69 mM; Need ultrasonic and warming)

Alternative Names:
NSC 31868;Osthol;Ostol

Observed Molecular Weight:
244.29

Product Description

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Osthole is a natural antihistamine alternative. Osthole may be a potential inhibitor of **histamine H_1 receptor** activity.

IC50 & Target: Histamine H_1 receptor[1]

In Vitro: Osthole (p[1]. Assessment of cell viability does not detect obvious toxicity when Osthole is used at a dose up to 100 μM. However, when the dose reached 500 μM, Osthole started to show toxic effect. Based on these observations, Osthole is used in all in vitro studies at the dose range of 10 to 100 μM. Osthole dose-dependently promotes osteoblast differentiation, as shown by the upregulation of osteoblast differentiation marker genes such as type I collagen (*col1*), bone sialoprotein (*BSP*) and osteocalcin (*OC*) (2 days of culture). Osthole promotes ALP activity in mouse primary osteoblasts in a dose-dependent manner[2].

In Vivo: Subcutaneous injection of Osthole at a dose of 5 mg/kg per day onto mouse calvariae significantly stimulates local bone formation, as shown by histologic analysis of calvarial samples harvested 2 weeks after the last injection and stained with H&E orange G. Histomorphometric analysis reveals that Osthole has a significant effect on bone formation as potent as the positive control, the microtubule inhibitor TN-16. This effect, however, is not seen when Osthole is used at a dose of 1 mg/kg per day. Intraperitoneal injection of Osthole for 8 weeks significantly reverses bone loss in the ovariectomized rats. Histologic examination of the L4samples stained with trinitrophenol poinsettia demonstrates a partial recovery of the trabecular structure in ovariectomized rats treated with Osthole. Histomorphometric analysis shows that treatment with Osthole significantly increases total BMD, trabecular bone volume, and trabecular thickness and decreases trabecular separation[2].