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

Andrographolide

Catalog No: tcsc3334

Available Sizes

Size: 100mg

Size: 500mg

Specifications

CAS No:
5508-58-7

Formula:
$C_{20}H_{30}O_5$

Pathway:
NF-κB

Target:
NF-κB

Purity / Grade:
>98%

Solubility:
H2O :

Alternative Names:
Andrographis

Observed Molecular Weight:
350.45

Product Description

Andrographolide is a **NF-κB** inhibitor, which inhibits NF-κB activation through covalent modification of a cysteine residue on **p50** in endothelial cells without affecting IκBα degradation or p50/p65 nuclear translocation.

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

IC50 & Target: NF-κB1/p50[1]

In Vitro: Andrographolide (AP) concentration-dependently suppresses receptor activator of nuclear factor kappa B ligand (RANKL)-mediated osteoclast differentiation and bone resorption in vitro and reduces the expression of osteoclast-specific markers. Andrographolide attenuates inflammation by inhibition of TNFα-induced NF-κB activation through covalent modification of reduced Cys^{62} of p50, without affecting IκBα degradation or p50/p65 nuclear translocation. Andrographolide also inhibits the ERK/MAPK signalling pathway without affecting p38 or JNK signalling. Andrographolide inhibits osteoclast differentiation of RAW 264.7 cells in a concentration-dependent manner. Andrographolide suppresses osteoclast formation in a concentration-dependent manner without any obvious cytotoxic effects, in both BMMs and RAW 264.7 cells. Andrographolide treatment substantially reduces the area of bone resorption. Only approximately 30% of the bone resorption observed in the control group is achieved after treatment with 2.5 μM Andrographolide. Osteoclastic bone resorption is almost completely inhibited after treatment with 10 μM Andrographolide[1].

In Vivo: Treatment with Andrographolide (5 or 30 mg/kg) reduces the extent of bone loss induced by LPS. Moreover, Andrographolide slightly increases the BMD and cortex thickness compared to LPS treatment. Histological examination confirms the protective effects of Andrographolide on LPS-induced bone loss. LPS injection leads to inflammatory bone erosion and increased numbers of TRAP-positive osteoclasts[1].