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

Teprenone

Catalog No: tcsc3560

Available Sizes

Size: 100mg

Size: 500mg

Specifications

CAS No:
6809-52-5

Formula:
$C_{23}H_{38}O$

Pathway:
Metabolic Enzyme/Protease;Cell Cycle/DNA Damage

Target:
HSP;HSP

Purity / Grade:
>98%

Solubility:
DMSO : ≥ 32 mg/mL (96.81 mM)

Alternative Names:
Geranylgeranylacetone

Observed Molecular Weight:
330.55

Product Description

Teprenone is a anti-ulcer drug, and works as an inducer of heat shock proteins (**HSPs**).

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IC50 & Target: HSP[1]

In Vitro: Teprenone is an inducer of HSPs. Teprenone (Geranylgeranylacetone, 1 μM) significantly prevents ethanol-induced exfoliation, and reduces lactate dehydrogenase (LDH) release in gastric mucosal cells. Teprenone (1 μM) gradually increases HSC70 level, and rapidly accumulates the stress-inducible HSP90, HSP70, and HSP60 concentrations within 30-60 min. Teprenone also activates the heat shock factor 1[1]. Teprenone (0-20 μM) slightly increases human umbilical vein endothelial cell (HUVEC) viability following irradiation (IR). Teprenone (10 μM) exhibits no effects on HUVEC migration and invasion, but enhances HUVEC tube formation and wound healing both with and without IR. Teprenone (10 μM) also promotes angiogenesis by inducing VEGF and eNOS expression in HUVECs[3].

In Vivo: Teprenone (200 mg/kg, p.o.) results in the accumulation of HSP70 mRNA in rats, and the accumulation is enhanced by stress addition in the mucosa of Teprenone-pretreated rats compared with that of vehicle-pretreated rats. Teprenone (200 mg/kg, p.o.) markedly suppresses the ulcer formation after 2- and 4-hour stress loading in rats[1]. Teprenone (200 mg/kg daily) induces HSP72 in retinal ganglion cells (RGCs) from rat retinas. Teprenone significantly reduces the loss of RGCs (evaluated after intraocular pressure (IOP) elevation), lessens optic nerve damage, decreases the number of TUNEL-positive cells in the RGC layer, and increases HSP72 in a rat model of glaucoma[2]. Teprenone (200 mg/kg, p.o.) shows protective effect on radiation-induced intestinal injury in mice[3].