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

Parthenolide

Catalog No: tcsc1919

Available Sizes

Size: 50mg

Size: 100mg

Size: 200mg

Specifications

CAS No:
20554-84-1

Formula:
$C_{15}H_{20}O_3$

Pathway:
Autophagy;NF-κB;Autophagy

Target:
Autophagy;NF-κB;Mitophagy

Purity / Grade:
>98%

Solubility:
DMSO : ≥ 100 mg/mL (402.71 mM)

Alternative Names:
(-)-Parthenolide

Observed Molecular Weight:
248.32

Product Description

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Parthenolide is an **NF-κB** inhibitor, reduces histone deacetylase 1 (HDAC-1) and DNA methyltransferase 1 independent of NF-κB inhibition.

IC50 & Target: NF-κB, HDAC1, DNA Methyltransferase 1[1]

In Vitro: Parthenolide (PTL) has a dose-dependent growth inhibition effect on NSCLC cells Calu-1, H1792, A549, H1299, H157, and H460. Parthenolide can induce cleavage of apoptotic proteins such as CASP8, CASP9, CASP3 and PARP1 both in concentration- and time-dependent manner in tested lung cancer cells, indicating that apoptosis is trigged after Parthenolide exposure. In addition to induction of apoptosis, Parthenolide also induces G_0/G_1 cell cycle arrest in a concentration-dependent manner in A549 cells and G_2 /M cell cycle arrest in H1792 cells[2].

In Vivo: Only Parthenolide, the HDAC inhibitor with anti-inflammatory features, displayed a potent anti-apoptotic effect in *Phb1* KO hepatocytes. Indeed, TSA and Parthenolide-treated hepatocytes showed increased levels of FXR, and reduced levels of CYP7A1, HDAC4, TNFα, TRAIL and Bax suggesting a less toxic effect of bile acids as a results of specific HDAC inhibition, resulting in the attenuation of the *Phb1* KO hepatocytes apoptotic response. Importantly, Parthenolide exerts a protective effect from the liver injury after BDL in *Phb1* KO mice. Indeed, Parthenolide treatment results in a reduction of the mortality rate of this mice after BDL associated with a lower apoptotic response as revealed by a reduction of necrotic areas, Tunel-staining, as well as decreased ALT (8431±957 vs.4225±210 U/L) and AST (4805±300 vs.2242±438 U/L) activities compared to control *Phb1* KO mice[3].