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Ginsenoside Rh3

Catalog No: tcsc3836

Available Sizes

Size: 5mg

Size: 10mg

Specifications

CAS No:
105558-26-7

Formula:
$C_{36}H_{60}O_7$

Pathway:
NF-κB

Target:
Keap1-Nrf2

Purity / Grade:
>98%

Solubility:
10 mM in DMSO

Observed Molecular Weight:
604.86

Product Description

Ginsenoside Rh3 is a bacterial metabolite of Ginsenoside Rg5. Ginsenoside Rh3 treatment in human retinal cells induces **Nrf2** activation.

IC50 & Target: Nrf2[1]

In Vitro: Ginsenoside Rh3 inhibits UV-induced oxidative damages in retinal cells via activating nuclear-factor-E2-related factor 2

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(Nrf2) signaling. Ginsenoside Rh3 treatment in retinal cells induces Nrf2 activation. The potential activity of Ginsenoside Rh3 is tested on Nrf2 signaling in the retinal pigment epithelium cells (RPEs). The qRT-PCR assay results demonstrate that treatment with Ginsenoside Rh3 dose-dependently increases mRNA transcription and expression of key Nrf2-regulated genes, including *HO1*, *NQO1* and *GCLC*. Consequently, protein expressions of these Nrf2-dependent genes (HO1, NQO1 and GCLC) are also significantly increased in Ginsenoside Rh3 (3-10 μM)-treated RPEs. Notably, although *Nrf2 mRNA* level is unchanged after Ginsenoside Rh3 treatment, its protein level is significantly increased by Rh3[1]. EZ-Cytox assay is used to assess the effect of ginsenoside-Rh3 on SP 1-keratinocytes viability. Ginsenoside Rh3 (0.01, 0.1, 1 and 10 μM) shows no cytotoxic effect at all concentrations[2].

In Vivo: The potential effect of Ginsenoside Rh3 is examined on mouse retina, using the light-induced retinal damage model. Ginsenoside Rh3 intravitreal injection (5 mg/kg body weight, 30 min pre-treatment) significantly attenuates light-induced decrease of both a- and b-wave amplitude. The electroretinography (ERG)\'s a-wave decreases to 46.03±1.62% % of control level after light exposure, which is back to 71.84±7.51% with Ginsenoside Rh3 administration. The b-wave is 40.19±3.34% of control level by light exposure, and Rh3 intravitreal injection brings back to 80.01±2.37% of control level[1].