

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

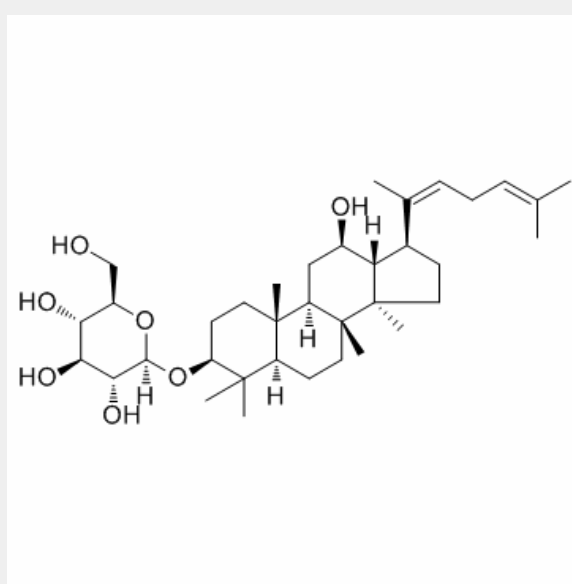
Ginsenoside Rh3 is a bacterial metabolite of Ginsenoside Rg5. Ginsenoside Rh3 treatment in human retinal cells induces **Nrf2** activation.

IC50 & Target: Nrf2^[1]

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

(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 μ M)-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 μ M) 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 $46.03 \pm 1.62\%$ % of control level after light exposure, which is back to $71.84 \pm 7.51\%$ with Ginsenoside Rh3 administration. The b-wave is $40.19 \pm 3.34\%$ of control level by light exposure, and Rh3 intravitreal injection brings back to $80.01 \pm 2.37\%$ of control level^[1].



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