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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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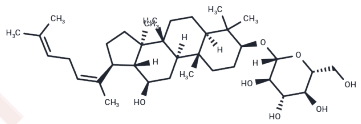
Data Sheet (Cat.No.TQ0199)

TargetMol

Ginsenoside Rh3

Chemical Properties



CAS No. : 105558-26-7

Formula: C36H60O7

Molecular Weight: 604.86

Appearance: no data available

Storage: store at low temperature
Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	Ginsenoside Rh3 is a natural product extracted from Ginseng C. A. Mey.Ginsenoside Rh3 has antifungal and antioxidant activities and induces Nrf2 activation in human retinal cells.
Targets(IC50)	Antioxidant,Nrf2,Antifungal
In vitro	Ginsenoside Rh3, at concentrations ranging from 0.01 to 10 μM, exhibits no cytotoxicity in tested models. In retinal pigment epithelium cells (RPEs), Ginsenoside Rh3 activates the Nrf2 pathway, as evidenced by dose-dependent increases in mRNA and protein levels of Nrf2-regulated genes, such as HO1, NQO1, and GCLC, following treatment. This enhancement in gene expression indicates a potentiation of cellular antioxidative mechanisms without altering Nrf2 mRNA levels, although Nrf2 protein levels significantly rise post-treatment with Ginsenoside Rh3 (3-10 μM). Additionally, the viability of SP 1-keratinocytes in response to Ginsenoside Rh3 has been evaluated using the EZ-Cytox assay, further delineating its safety and therapeutic potential.
In vivo	Ginsenoside Rh3 (5mg/kg; intravitreal injection; 30min 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 the 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 the control level by light exposure, and Rh3 intravitreal injection brings back to 80.01±2.37% of the control level.[1]
Cell Research	SP-1 keratinocytes are seeded in 96 well plates (2×10^4 cells/well). After 24 h, the media is replaced with media containing various concentrations of (A) SKRG, or (B) Ginsenoside Rh3 (0.01, 0.1, 1 and 10 μM). Control cells are treated with DMSO at a final concentration of 0.1%. After 24 h, the media containing the compounds or DMSO is replaced with media containing 10% EZ-Cytox. The cells are then incubated at 37°C for 1 h, and the absorbance is measured using a microplate reader at a wavelength of 450 nm. All assays are performed in triplicate [2].
Animal Research	The BALB/c mice (male, 5-6 week old, 17-18g weight) are used. The pupillary dilation is performed before exposure to 5000lx of white fluorescent light. Thirty min before light exposure, Ginsenoside Rh3 (at 5 mg/kg body weight) is injected intravitreally to the right eye. ERG recording after light exposure is also reported early. The b-wave amplitude is measured from the trough of the a-wave to the peak of the b-wave, and the amplitude of the a-wave is measured from the initial baseline [1].

Solubility Information

Solubility	Ethanol: 25 mg/mL (41.33 mM), DMSO: 3.02 mg/mL (5 mM),Sonication and heating are recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.6533 mL	8.2664 mL	16.5328 mL
5 mM	0.3307 mL	1.6533 mL	3.3066 mL
10 mM	0.1653 mL	0.8266 mL	1.6533 mL
50 mM	0.0331 mL	0.1653 mL	0.3307 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

Tang CZ, et al. Activation of Nrf2 by Ginsenoside Rh3 protects retinal pigment epithelium cells and retinal ganglion cells from UV. Free Radic Biol Med. 2018 Mar;117:238-246.