

Smilagenin

Chemical Properties

CAS No. : 126-18-1

Formula: C₂₇H₄₄O₃

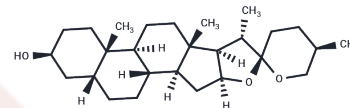
Molecular Weight: 416.64

Keep away from direct sunlight, Keep away from moisture

Storage:

Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



Biological Description

Description	Smilagenin is a natural anthocyanin glycoside exhibiting AchE inhibitory activity (IC ₅₀ = 43.29 mg/L). It promotes CREB phosphorylation to increase GDNF and BDNF mRNA levels, attenuates Aβ(25-35)-induced neurodegeneration, and demonstrates neuroprotective and memory-enhancing effects.
Targets(IC ₅₀)	Epigenetic Reader Domain, Cholinesterase (ChE), GDNF
In vitro	In MPP ⁺ -treated SH-SY5Y cells, Smilagenin (10 μM, 24 hours) increased the mRNA levels of GDNF and BDNF by promoting CREB phosphorylation [2]. Smilagenin (10 μM, 24 hours) enhanced the survival rate of SH-SY5Y cells [3].
In vivo	Smilagenin (10 or 26 mg/kg, intragastric administration, once daily for 60 days) has a protective effect against damage to dopaminergic neurons in a chronic MPTP/Probenecid-induced mouse model [2].

Solubility Information

Solubility	DMSO: < 1 mg/mL (insoluble), Ethanol: ≥ 8 mg/mL, Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.4002 mL	12.0008 mL	24.0015 mL
5 mM	0.480 mL	2.4002 mL	4.8003 mL
10 mM	0.240 mL	1.2001 mL	2.4002 mL
50 mM	0.048 mL	0.240 mL	0.480 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.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

He X, et al. Smilagenin Protects Dopaminergic Neurons in Chronic MPTP/Probenecid-Lesioned Parkinson's Disease Models. *Front Cell Neurosci.* 2019 Feb 5;13:18.

Hu Y, et al. Regulation of M1-receptor mRNA stability by smilagenin and its significance in improving memory of aged rats. *Neurobiol Aging.* 2010 Jun;31(6):1010-9.

Zhang R, et al. Smilagenin attenuates beta amyloid (25-35)-induced degeneration of neuronal cells via stimulating the gene expression of brain-derived neurotrophic factor. *Neuroscience.* 2012 May 17;210:275-85

Athauda D, Foltynie T. The ongoing pursuit of neuroprotective therapies in Parkinson disease. *Nat Rev Neurol.* 2015 Jan;11(1):25-40. doi: 10.1038/nrneuro.2014.226. Epub 2014 Dec 2. Review. PubMed PMID: 25447485.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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