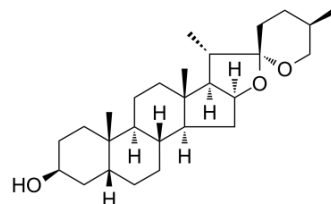


Smilagenin

Cat. No.:	HY-106353		
CAS No.:	126-18-1		
Molecular Formula:	C ₂₇ H ₄₄ O ₃		
Molecular Weight:	416.64		
Target:	Others		
Pathway:	Others		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

□□□□ : ≥ 125 mg/mL (300.02 mM)
 Ethanol : ≥ 10 mg/mL (24.00 mM)
 DMSO : < 1 mg/mL (insoluble or slightly soluble)
 * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent		1 mg	5 mg	10 mg
	Concentration	Mass			
	1 mM		2.4002 mL	12.0008 mL	24.0015 mL
	5 mM		0.4800 mL	2.4002 mL	4.8003 mL
	10 mM		0.2400 mL	1.2001 mL	2.4002 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Smilagenin (SMI) is a lipid-soluble small-molecule steroidal sapogenin from *Rhizoma anemarrhenae* and *Radix asparagi* widely used in traditional Chinese medicine for treating chronic neurodegeneration diseases^[1]. Smilagenin (SMI) improves memory of aged rats by increasing the muscarinic receptor subtype 1 (M1)-receptor density^[2]. Smilagenin (SMI) attenuates Aβ(25-35)-induced neurodegeneration via stimulating the gene expression of brain-derived neurotrophic factor, may represents a novel therapeutic strategy for AD^[3].

In Vitro

Smilagenin (10 μM; 24 hours) increases SH-SY5Y cell survival compared with Aβ(25-35) intoxicated cells^[3]. Smilagenin (10 μM; 24 hours) increases neurotrophic factor (GDNF) and neurotrophic factor (BDNF) mRNA level by promoting CREB phosphorylation in 1-methyl-4-phenylpyridinium (MPP+) treated SH-SY5Y cells^[2].
Cell Viability Assay^[3]

	Cell Line:	SH-SY5Y cells
	Concentration:	10 μ M
	Incubation Time:	24 hours
	Result:	Elevated the SH-SY5Y cell viability.
	RT-PCR^[2]	
	Cell Line:	SH-SY5Y cells
	Concentration:	10 μ M
	Incubation Time:	24 hours
	Result:	Increased GDNF and BDNF transcription.
In Vivo	Smilagenin (intragastric administration; 10 or 26 mg/kg, once daily; 60 days) prevents the impairment of dopaminergic neurons in chronic MPTP/probenecid-induced mouse model ^[2] .	
	Animal Model:	MPTP/probenecid-induced mouse model ^[2]
	Dosage:	10 or 26 mg/kg
	Administration:	Intragastric administration; 10 or 26 mg/kg; once daily; 60 days
	Result:	Ameliorated locomotor ability of MPTP/probenecid-lesioned mice.

REFERENCES

- [1]. 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.
- [2]. 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.
- [3]. 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

Caution: Product has not been fully validated for medical applications. For research use only.

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