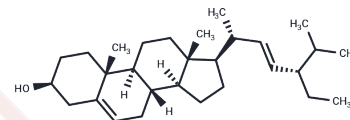


Stigmasterol

Chemical Properties

CAS No. :	83-48-7
Formula:	C ₂₉ H ₄₈ O
Molecular Weight:	412.69
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	Stigmasterol (Stigmasterin) is a phytosterol with major functions in the maintenance of cell membrane structure and physiology. Stigmasterol lowers cholesterol levels and has anti-tumor, anti-inflammatory, and immunomodulatory effects.
Targets(IC50)	MMP,Endogenous Metabolite
In vitro	METHODS: CHET3 (10 uM) was used for in vitro electrophysiological experiments to investigate its effect on K ⁺ channels. RESULTS: CHET3 could activate the TASK-3 channel with minimal effects on other K ₂ P channels and ion channels.[1]
In vivo	METHODS: To evaluate the analgesic effect, CHET3 (10 mg/kg) was intraperitoneally injected into mice and rats in the pain models of tail dip test, formal test, and paw pressure test. RESULTS: CHET3 showed significant analgesic effects in vivo and was able to reduce different types of pain such as hot, cold and mechanical pain. [1]

Solubility Information

Solubility	Ethanol: 0.7 mg/mL (1.7 mM),Sonication is recommended. H ₂ O: Insoluble, DMSO: Insoluble (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.4231 mL	12.1156 mL	24.2313 mL
5 mM	0.4846 mL	2.4231 mL	4.8463 mL
10 mM	0.2423 mL	1.2116 mL	2.4231 mL
50 mM	0.0485 mL	0.2423 mL	0.4846 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

- Zhao H, et al. Stigmasterol Simultaneously Induces Apoptosis and Protective Autophagy by Inhibiting Akt/mTOR Pathway in Gastric Cancer Cells. *Front Oncol.* 2021 Feb 23;11:629008.
- Zhang Y, Yu F, Hao J, et al. Study on the Effective Material Basis and Mechanism of Traditional Chinese Medicine Prescription (QJC) Against Stress Diarrhea in Mice. *Frontiers in Veterinary Science.* 2021, 8.
- Sun M, Cao Y, Cheng J, et al. Stigmasterol Activates the mTOR Signaling Pathway by Inhibiting ORP5 Ubiquitination to Promote Milk Synthesis in Bovine Mammary Epithelial Cells. *Journal of Agricultural and Food Chemistry.* 2024
- Bae H, et al. Stigmasterol Causes Ovarian Cancer Cell Apoptosis by Inducing Endoplasmic Reticulum and Mitochondrial Dysfunction. *Pharmaceutics.* 2020 May 28;12(6):488.
- Antwi AO, et al. Stigmasterol Alleviates Cutaneous Allergic Responses in Rodents. *Biomed Res Int.* 2018 Jul 24; 2018:3984068.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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