

Brassicasterol

Chemical Properties

CAS No. : 474-67-9

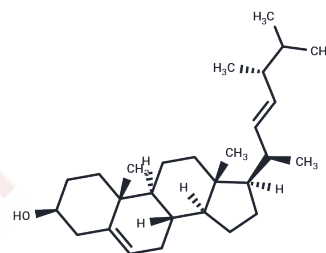
Formula: C₂₈H₄₆O

Molecular Weight: 398.66

Storage: Keep away from moisture, Keep away from direct sunlight

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	Brassicasterol, as a metabolite of ergosterol, exhibits cardiovascular protective properties. This compound demonstrates antitumor effects in prostate cancer through dual targeting of AKT and androgen receptor signaling pathways. Brassicasterol shows inhibitory activity against HSV-1 (IC ₅₀ =1.2 μM) and Mycobacterium tuberculosis. By inhibiting sterol δ ₂₄ -reductase, it delays atherosclerosis progression and has been identified as a cerebrospinal fluid biomarker for Alzheimer's disease.
Targets(IC ₅₀)	Androgen Receptor, Akt, Antibacterial, HSV, Drug Metabolite
In vitro	Methods: LNCaP cells were treated with Brassicasterol (50 μM, 48 h) to study its effects on cell cycle and apoptosis. Results: Brassicasterol was able to arrest the cell cycle of LNCaP cells at the G ₁ phase and induce apoptosis. [1]
In vivo	Methods: Brassicasterol (100 mg/kg, intraperitoneal injection, 15 days) was used to treat HepG2.215 tumor xenograft model mice. Tumor size and mouse weight were measured every 3 days to study its therapeutic effect. Results: Brassicasterol significantly reduced tumor volume in mice without affecting their body weight. [2]

Solubility Information

Solubility	Ethanol: 3.7 mg/mL (9.28 mM), 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	2.5084 mL	12.542 mL	25.084 mL
5 mM	0.5017 mL	2.5084 mL	5.0168 mL
10 mM	0.2508 mL	1.2542 mL	2.5084 mL
50 mM	0.0502 mL	0.2508 mL	0.5017 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

Vanmierlo T, et al. The plant sterol brassicasterol as additional CSF biomarker in Alzheimer's disease. *Acta Psychiatr Scand.* 2011 Sep;124(3):184-92.

Zeng J, et al. Brassicasterol inhibits hepatitis B virus-associated hepatocellular carcinoma development via suppression of AKT signaling pathway. *Infect Agent Cancer.* 2023 Apr 20;18(1):22.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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