

Guaiol

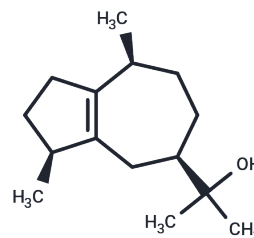
Chemical Properties

CAS No. : 489-86-1

Formula: C₁₅H₂₆O

Molecular Weight: 222.37

Storage: Keep away from direct sunlight, Keep away from moisture, Store at low temperature
 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	Guaiol is a natural product with antibacterial activity that inhibits <i>B. subtilis</i> , <i>E. coli</i> , and <i>Leishmania donovani</i> .
Targets(IC50)	Antibacterial, Parasite
In vitro	Guaiol (150 μ M, 24 hours) exhibited inhibitory activity against non-small cell lung cancer cell lines A549 and H1299 [1]. In BALB/c mice with thioglycolate-stimulated parasite-infected macrophages, Guaiol (0.1-50 μ g/ml, 24 hours) suppressed intracellular parasite growth [5].
In vivo	Guaiol (8mg/kg, intraperitoneal injection, three times a week for 40 days) exhibited antitumor activity in the NSCLC parazacco <i>spilurus</i> subsp. <i>spilurus</i> xenograft mouse model, with experimental results showing reductions in both tumor volume and weight [1].

Solubility Information

Solubility	DMSO: 25 mg/mL (112.43 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	4.497 mL	22.485 mL	44.9701 mL
5 mM	0.8994 mL	4.497 mL	8.994 mL
10 mM	0.4497 mL	2.2485 mL	4.497 mL
50 mM	0.0899 mL	0.4497 mL	0.8994 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

- Yang, Q, et al. (-)-Guaiol regulates RAD51 stability via autophagy to induce cell apoptosis in non-small cell lung cancer *Oncotarget*. 2016 Sep 20;7(38):62585-62597.
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- Liu, T, et al. Guaiol - a naturally occurring insecticidal sesquiterpene *Nat. Prod. Commun.* 8(10), 1353-1354 (2013).
- Garcia M C F, et al. The in vitro antileishmanial activity of essential oil from *Aloysia gratissima* and guaiol, its major sesquiterpene against *Leishmania amazonensis*[J]. *Parasitology*, 2018, 145(9): 1219-1227.
- Thurman E M. Analysis of terpenes in hemp (*Cannabis sativa*) by gas chromatography/mass spectrometry: Isomer identification analysis[M]//*Comprehensive Analytical Chemistry*. Elsevier, 2020, 90: 197-233.
- Yang M, et al. Determination and pharmacokinetic study of guaiol in rat plasma by gas chromatography-mass spectrometry with selected ion monitoring[J]. *Journal of Chromatography B*, 2018, 1085: 30-35.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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