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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

linkedin.com/company/szaboscandic

Hexahydrofarnesyl acetone

Cat. No.: HY-N3074

CAS No.: 502-69-2

Molecular Formula: $C_{18}H_{36}O$

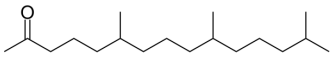
Molecular Weight: 268.48

Target: Bacterial; Antibiotic

Pathway: Anti-infection

Storage:

Pure form	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 33.33 mg/mL (124.14 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.7247 mL	18.6234 mL	37.2467 mL
	5 mM	0.7449 mL	3.7247 mL	7.4493 mL
	10 mM	0.3725 mL	1.8623 mL	3.7247 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (9.31 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (9.31 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (9.31 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Hexahydrofarnesyl acetone (6,10,14-Trimethyl-2-pentadecanone) is a oral active sesquiterpene with oral activity, exhibiting antibacterial, anti-inflammatory, and anticancer properties, and is used in pain relief research[1][2][3].

In Vitro

The essential oil of Lindera nacusua (containing 6.83% Hexahydrofarnesyl acetone, 0.2 mg of essential oil, 0.1 mL microbial suspension, 24 hours) exhibits significant antibacterial activity against Staphylococcus aureus and Candida albicans, with inhibition zones reaching 2.5 mm and 2.0 mm, respectively, surpassing the positive control, Amoxicillin (HY-B0467A)[2].
The essential oil of Graptophyllum pictum (containing 2.6% Hexahydrofarnesyl acetone, 5 µL of essential oil, 3, 4, or 5 days)

shows significant cytotoxicity against KB cells (epidermoid carcinoma of oral cavity), NCI-H187 cells (small cell lung carcinoma), and Vero cells (African green monkey kidney)[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Cytotoxicity Assay[3]

Cell Line:	KB cells (epidermoid carcinoma oforal cavity), MCF-7 cells (breast adenocarcinoma), NCI-H187 cells (small cell lung carcinoma) and Vero cells (the African green monkey kidney)
Concentration:	5 μL (administered as essential oil containing 2.6% Hexahydrofarnesyl acetone)
Incubation Time:	3 (KB and MCF-7 cells), 4 (Vero cells) or 5 (NCI-H187 cells) days
Result:	Had the IC_{50} values of 27.04, 25.27, and 26.52 μg/mL against KB cells, NCI-H187 cells, and Vero cells, respectively.

In Vivo

The essential oil of Albizia zygia (containing 33.14% Hexahydrofarnesyl acetone, 100, 200, 400 mg/kg, p.o., single dose) inhibits carrageenan (HY-125474)-induced inflammation in the paw edema model of Wistar rats[1].

The essential oil of Albizia zygia (containing 33.14% Hexahydrofarnesyl acetone, 100, 200, 400 mg/kg, p.o., single dose) exhibits analgesic effects in the formalin-induced pain model in Wistar rats[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Carrageenan (HY-125474)-induced paw edema model in Wistar rats (150-200 g)[1]
Dosage:	100, 200, 400 mg/kg
Administration:	Oral gavage (p.o.), single dose
Result:	Exerted a significant dose-dependent inhibitory effect on the development of carrageenan (HY-125474)-induced paw swelling.

Animal Model:	Formalin-induced pain model in Wistar rats (150-200 g)[1]
Dosage:	100, 200, 400 mg/kg
Administration:	Oral gavage (p.o.), single dose
Result:	Increased the tolerance of rats to Formalin-induced pain.

REFERENCES

[1]. Jiangseubchatveera N, et al. The Chemical Constituents and the Cytotoxicity, Antioxidant and Antibacterial Activities of the Essential Oil of Graptophyllum pictum (L.) Griff[J]. Journal of Essential Oil Bearing Plants, 2015, 18(1): 11-17.

[2]. Opeyemi N Avoseh, et al.Albizia lebbeck and Albizia zygia volatile oils exhibit anti-nociceptive and anti-inflammatory properties in pain models.J Ethnopharmacol. 2021 Mar 25;268:113676

[3]. Guoqing Wei, et al. Essential oil composition and antibacterial activity of Lindera nacusua (D. Don) Merr. Nat Prod Res. 2016 Dec;30(23):2704-2706.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA