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Produktinformation

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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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Lactucin

Cat. No.: HY-N9438

CAS No.: 1891-29-8

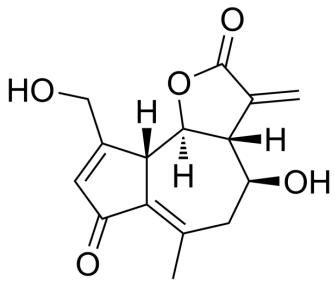
Molecular Formula: $C_{15}H_{16}O_5$

Molecular Weight: 276.28

Target: Apoptosis; Parasite

Pathway: Apoptosis; Anti-infection

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 250 mg/mL (904.88 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Concentration \ Solvent \ Mass	1 mg	5 mg	10 mg
1 mM	3.6195 mL	18.0976 mL	36.1952 mL
5 mM	0.7239 mL	3.6195 mL	7.2390 mL
10 mM	0.3620 mL	1.8098 mL	3.6195 mL

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

BIOLOGICAL ACTIVITY

Description

Lactucin is an anti-inflammatory agent. Lactucin induces cancer cell apoptosis. Lactucin also shows analgesic, anticancer and antimalarial activities[1][2][3][4].

In Vitro

Lactucin shows moderate inhibitory activity against LPS-induced nitric oxide (NO) production in RAW 264.7 macrophages[1].
Lactucin (0-100 μM; 24 and 48 h) induces cytotoxic effects in HL-60 cells in a dose– and time-dependent manner[3].
Lactucin (0-100 μM; 48 h) induces apoptosis and sub-G1 cell cycle arrest in HL-60 cells[3].
Lactucin (10 μg/mL; 48 h) completely prevents Plasmodium falciparum parasitemia[4].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[3]

Cell Line:	HL-60
Concentration:	0, 5, 25, 50, and 100 μM
Incubation Time:	24 and 48 h

Result:	Induced significant cytotoxic effects in these cancer cells in a dose– and time-dependent manner.

Apoptosis Analysis[3]

Cell Line:	HL-60
Concentration:	0, 5, 50 and 100 μM
Incubation Time:	48 h
Result:	Induced apoptosis. Swelling of the mitochondria and endoplasmic reticulum (ER) was detected in the cells.

Cell Cycle Analysis[3]

Cell Line:	HL-60
Concentration:	0, 5, 50 and 100 μM
Incubation Time:	48 h
Result:	Induced sub-G1 cell cycle arrest.

In Vivo

Lactucin (15 and 30 mg/kg; i.p.; once) decreases the spontaneous locomotor activity and shows analgesic properties in mice [2].

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

Animal Model:	Male Albino-Swiss mice (18-24 g)[2]
Dosage:	15 and 30 mg/kg
Administration:	Intraperitoneal injection, once
Result:	Decreased the spontaneous locomotor activity and showed analgesic properties in the hot plate test.

REFERENCES

[1]. Dang T, et al. Sesquiterpenoids with diverse carbon skeletons from the roots of Cichorium glandulosum and their anti-inflammatory activities. Fitoterapia. 2019 Jul;136:104170.

[2]. Gromek D, et al. Biologically active preparations from Lactuca virosa L. Phytotherapy Research, 1992, 6(5): 285-287.

[3]. Zhang F H, et al. Lactucin induces potent anti-cancer effects in HL-60 human leukemia cancer cells by inducing apoptosis and sub-G1 cell cycle arrest. Bangladesh Journal of Pharmacology, 2016, 11(2): 478-484.

[4]. Bischoff TA, et al. Antimalarial activity of lactucin and lactucopicrin: sesquiterpene lactones isolated from Cichorium intybus L. J Ethnopharmacol. 2004 Dec;95(2-3):455-7.

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

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