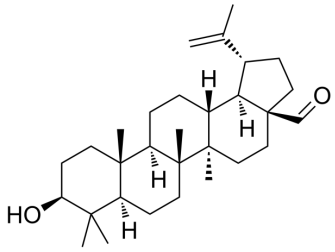
Betulinaldehyde

Cat. No.:	HY-N0084
CAS No.:	13159-28-9
Molecular Formula:	$C_{30}H_{48}O_2$
Molecular Weight:	440.7
Target:	Bacterial
Pathway:	Anti-infection
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 20 mg/mL (45.38 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.2691 mL	11.3456 mL	22.6912 mL
	5 mM	0.4538 mL	2.2691 mL	4.5382 mL
	10 mM	0.2269 mL	1.1346 mL	2.2691 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 mg/mL (4.54 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2 mg/mL (4.54 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Betulinaldehyde (Betunal) Has anti-cancer and anti-staphylococcus aureus activity. Betulinaldehyde Suppressible Akt, MAPK sum STAT3 Signal path, increase self-transfer, Suppression A549 Cellular vitality, increase and transfer. Betulinaldehyde suppresses PLCγ1/Ca^{2+}/MMP9 signal pathway, has a key effect on vascular plasticity, and is available for cardiovascular disease (CVD) research.

In Vitro

Betulinaldehyde (20, 40, 80 μM; 24 h) inhibits the colony formation ability of A549 cells in a concentration-dependent manner[3].
Betulinaldehyde (20 μM; 24 h) inhibits the phosphorylation of Akt, MAPK and STAT3 in A549 cells[3].
Betulinaldehyde (80 μM, 160 μM; 24 h) leads vascular remodeling in rats with carotid balloon injurys, and inhibits intracellular Ca2+ levels[4].

	MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Betulinaldehyde (50-200 mg/kg; ip; once daily for 1 week) inhibits the growth of A549 tumor xenografs in nude mice in vivo[3] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Phytomedicine. 2023 May 18, 154891.
- Fuel. 2018 Dec 15, 234:110-119.
- Catalysis Today. 2020 Aug.

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REFERENCES

[1]. Chung PY, et al. Identification, by gene expression profiling analysis, of novel gene targets in Staphylococcus aureus treated with betulinaldehyde. Res Microbiol. 2013 May;164(4):319-26.

[2]. Chung PY, et al. Transcriptional profiles of the response of methicillin-resistant Staphylococcus aureus to pentacyclic triterpenoids. PLoS One. 2013;8(2):e56687.

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