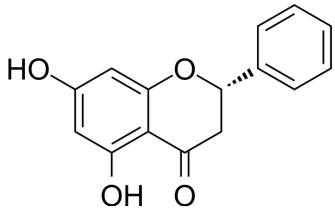
Pinocembrin

Cat. No.:	HY-N0575
CAS No.:	480-39-7
Molecular Formula:	$C_{15}H_{12}O_4$
Molecular Weight:	256.25
Target:	Bacterial; Reactive Oxygen Species; Autophagy
Pathway:	Anti-infection; Immunology/Inflammation; Metabolic Enzyme/Protease; NF-κB; Autophagy
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 : 83.33 mg/mL (325.19 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	3.9024 mL	19.5122 mL	39.0244 mL
	5 mM	0.7805 mL	3.9024 mL	7.8049 mL
	10 mM	0.3902 mL	1.9512 mL	3.9024 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: ≥ 2.08 mg/mL (8.12 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (8.12 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (8.12 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Pinocembrin ((+)-Pinocoembrin) is a flavonoid found in propolis, acts as a competitive inhibitor of histidine decarboxylase, and is an effective anti-allergic agent, with antioxidant, antimicrobial and anti-inflammatory properties[1].

In Vitro

Pinocembrin (5, 10, 25, 50, 100 or 200 μM, 24 hours) significantly reduces cell viability of RBL-2H3 cells[1].
Pinocembrin (25 or 50 μM) suppresses iNOS, PGE-2 and COX-2 levels, increases p38-Mapk and IκB-α, and inhibits phosphorylation of IκB-α[1].

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

Cell Viability Assay[1]

Cell Line:	RBL-2H3 cells
Concentration:	5, 10, 25, 50, 100 or 200 μM
Incubation Time:	24 hours
Result:	Decreased cell viability by ⊠50% at ≥ 100 μM. Showed 75% cell viability at lower concentrations.

CUSTOMER VALIDATION

- Foods. 2023 Dec 1, 12(23), 4337.
- Microorganisms. 2023 May 29, 11(6), 1429.
- DNA Cell Biol. 2021 Sep 28.
- J Neurophysiol. 2022 Jan 5.

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REFERENCES

[1]. Hanieh H, et al. Pinocembrin, a novel histidine decarboxylase inhibitor with anti-allergic potential in in vitro. Eur J Pharmacol. 2017 Nov 5;814:178-186.

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