Xanthoxylin

Cat. No.: HY-N1063

CAS No.: 90-24-4

Molecular Formula: $C_{10}H_{12}O_4$

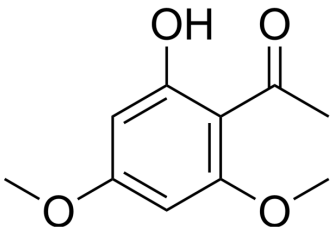
Molecular Weight: 196.2

Target: Fungal

Pathway: Anti-infection

Storage:

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



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (509.68 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	5.0968 mL	25.4842 mL	50.9684 mL
5 mM	1.0194 mL	5.0968 mL	10.1937 mL
10 mM	0.5097 mL	2.5484 mL	5.0968 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 (12.74 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (12.74 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Xanthoxylin (Xanthoxyline) can be isolated from Zanthoxylum simulans. Xanthoxylin has antifungal and antioxidant effects. The MIC of Xanthoxylin against Toxoplasma neonatorum and Aspergillus fumigatus were 50 μg/mL and 75 μg/mL, respectively. Xanthoxylin can be used in the study of anti-epileptic diseases[1][2][3].

In Vitro

Xanthoxylin (6.25-50 μg/mL, 72 h) inhibits cell viability in mouse B16F10 melanoma cells and induces melanin formation through cAMP-mediated PKA activation[3].

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

Cell Viability Assay[3]

Cell Line:	B16F10
Concentration:	3.125, 6.25, 12.5, 25, 50 μg/mL
Incubation Time:	72 h
Result:	Increased the cell viability at the concentration of 3.125 μg/ml but significantly decreased when a concentration of 50 μg/ml.

RT-PCR[3]

Cell Line:	B16F10
Concentration:	6.25, 12.5, 25, 50 μg/mL
Incubation Time:	72 h
Result:	Increased tyrosinase expression in a dose dependent manner and induced MITF expression.

REFERENCES

[1]. Moleephan W, et al. Effect of xanthoxylin on melanin content and melanogenic protein expression in B16F10 melanoma. Asian Biomedicine, 2012, 6(3): 413-422.

[2]. Cechinel Filho V, et al. Antispasmodic activity of xanthoxyline derivatives: structure-activity relationships.J Pharm Sci. 1995 Apr;84(4):473-5.

[3]. Pinheiro TR, et al. In vitro antifungal evaluation and studies on the mode of action of xanthoxyline derivatives.Arzneimittelforschung. 1999 Dec;49(12):1039-43.

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