Xanthotoxol

Cat. No.: HY-30152

CAS No.: 2009-24-7

Molecular Formula: $C_{11}H_6O_4$

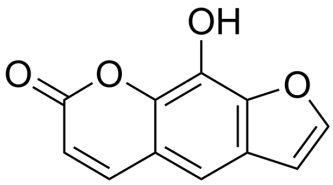
Molecular Weight: 202.16

Target: 5-HT Receptor; Reactive Oxygen Species; Endogenous Metabolite

Pathway: GPCR/G Protein; Neuronal Signaling; Immunology/Inflammation; Metabolic Enzyme/Protease; NF-κB

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 : 100 mg/mL (494.66 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	4.9466 mL	24.7329 mL	49.4658 mL
	5 mM	0.9893 mL	4.9466 mL	9.8932 mL
	10 mM	0.4947 mL	2.4733 mL	4.9466 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 (12.37 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (12.37 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Xanthotoxol (8-Hydroxypsoralen) It is a kind of fragrant bean substance, and it is a CYP450 inhibitor. Xanthotoxol has anti-inflammatory, anti-inflammatory, and 5-HT antagonistic and protective effects. Xanthotoxol inhibited CYP3A4 sum CYP1A2 IC50s separation 7.43 μM sum 27.82 μM. Xanthotoxol can pass through MAPK and NF-κB, inhibiting inflammation.

IC_{50} & Target		
	Human Endogenous Metabolite	serotonin

In Vitro

Xanthotoxol (62.5-250 μM; 20 min) reduces the production of inflammatory factors induced by LPS stimulation in a concentration-dependent manner and inhibits LPS-induced p65 translocation from the cytoplasm to the nucleus in RAW

	264.7 cells[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Xanthotoxol (5 mg/kg, 10 mg/kg; ip; 2 dose) can attenuate the expression of pro-inflammatory mediators in the ischemia/reperfusion (I/R) rat model, thereby inhibiting the inflammatory response after cerebral ischemia[4]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Eur J Pharmacol. 2023 Oct 21:176147.
- bioRxiv. 2023 Jun 15.

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REFERENCES

[1]. Ma Z, et al. Metabolism and Metabolic Inhibition of Xanthotoxol in Human Liver Microsomes. Evid Based Complement Alternat Med. 2016;2016:5416509.

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