Moracin C

Cat. No.: HY-N3245

CAS No.: 69120-06-5

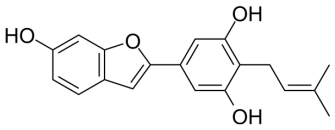
Molecular Formula: $C_{19}H_{18}O_4$

Molecular Weight: 310.34

Target: Reactive Oxygen Species; COX

Pathway: Immunology/Inflammation; Metabolic Enzyme/Protease; NF-κB

Storage: 4°C, protect from light
* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 250 mg/mL (805.57 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.2223 mL	16.1114 mL	32.2227 mL
5 mM	0.6445 mL	3.2223 mL	6.4445 mL
10 mM	0.3222 mL	1.6111 mL	3.2223 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.08 mg/mL (6.70 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Moracin C, a natural product, is an anti-inflammatory agent. Moracin C inhibits LPS-activated reactive oxygen species (ROS) and nitric oxide (NO) release from cells[1].

IC_{50} & Target

COX-2

In Vitro

Moracin C (1-50 μM, 24 h) inhibits LPS-activated reactive oxygen species (ROS) and nitric oxide (NO) release from RAW264.7 cells[1].
Moracin C (1-50 μM, 2 h) inhibits mRNA and protein expression of iNOS and COX-2 in RAW264.7 cells[1].
Moracin C (1-50 μM, 2 h) inhibits pro-inflammatory cytokine (IL-1β, IL-6 and TNF-α) productions in LPS-activated RAW 264.7 cells[1].
Moracin C (1-50 μM, 2 h) inhibits phosphorylation of p38, ERK and JNK in LPS-activated RAW 264.7 cells[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

RT-PCR[1]

Cell Line:	RAW 264.7 macrophages
Concentration:	1, 10, 25, 50 μM
Incubation Time:	2 h
Result:	Inhibited LPS-induced mRNA expression of iNOS and COX-2.

Western Blot Analysis[1]

Cell Line:	RAW 264.7 macrophages
Concentration:	1, 10, 25, 50 μM
Incubation Time:	2 h
Result:	Inhibited LPS-induced TLR4 expression and NF-κB activation. Reduced phosphorylated p38, ERK and JNK levels.

In Vivo

Moracin C (100 mg/kg, oral gavage, mice) was rapidly and well absorbed in the intestinal tract, and was highly distributed in the gastrointestinal tract, liver, kidneys, and lungs[2].

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

Animal Model:	Mice (PK Assay)[2]
Dosage:	100 mg/kg
Administration:	Oral gavage
Result:	Pharmacokinetic profile of Moracin C.

Parameters	Terminal half-life (min)	C_{max} (μg/mL)	T_{max} (min)	CL_R (mL/min/kg)
100 mg/kg	256	1.79	15	0.032

CUSTOMER VALIDATION

- J Nat Prod. 2023 Aug 25.

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REFERENCES

[1]. Yao X, et al. Moracin C, A Phenolic Compound Isolated from Artocarpus heterophyllus, Suppresses Lipopolysaccharide-Activated Inflammatory Responses in Murine Raw264.7 Macrophages. Int J Mol Sci. 2016 Jul 25;17(8):1199.

[2]. You BH, et al. Pharmacokinetic Properties of Moracin C in Mice. Planta Med. 2021 Jul;87(8):642-651.

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

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