Orientin

Cat. No.: HY-N0405

CAS No.: 28608-75-5

Molecular Formula: $C_{21}H_{20}O_{11}$

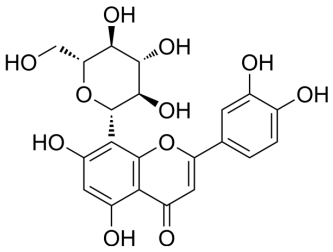
Molecular Weight: 448.38

Target: TNF Receptor; Interleukin Related

Pathway: Apoptosis; Immunology/Inflammation

Storage: 4°C, protect from light

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



SOLVENT & SOLUBILITY

In Vitro

DMSO : 31.25 mg/mL (69.70 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.2303 mL	11.1513 mL	22.3025 mL
	5 mM	0.4461 mL	2.2303 mL	4.4605 mL
	10 mM	0.2230 mL	1.1151 mL	2.2303 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 (4.64 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (4.64 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Orientin is a neuroprotective agentinhibits which has anti-inflammation, anti-oxidative, anti-tumor, and cardio protection properties. Orientin inhibits the levels of IL-6, IL-1β and TNF-α. Orientin increases IL-10 level. Orientin exhibits neuroprotective effect by inhibits TLR4 and NF-kappa B signaling pathway. Orientin can used in study neuropathic pain[1][2].

In Vitro

Orientin (1 μM) inhibits allergic inflammation in RBL-2H3, mBMMCs, and RPMCs cells[1].

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

Cell Viability Assay[1]

Cell Line:	RBL-2H3, mBMMCs, and RPMCs
Concentration:	0.01–100 μM

Incubation Time:	8 h
Result:	Significantly suppressed the levels of histamine and β-hexosaminidase in RBL-2H3, mBMMCs, and RPMCs cells. Inhibited the intracellular calcium levels in RBL-2H3, mBMMCs, and RPMCs cells. Markedly inhibited the pro-inflammatory cytokines expression and secretion in RBL-2H3 cells. Inhibited phosphorylation in RBL-2H3 cells.

In Vivo

Orientin (0.1–10 mg/kg for p.o.;once) inhibits allergic reaction in PCA mouse model[1].
Orientin (10–40 mg/kg for i.p.;once daily for 12 days) has an anti-neuroinflammatory effect in SNL rat model[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	PCA mouse model[1]
Dosage:	0.1–10 mg/kg
Administration:	Oral gavage (p.o.); Euthanized mouse after 1 h
Result:	Significantly suppressed PCA reactions in PCA mouse model.

Animal Model:	SNL rat model[2]
Dosage:	10, 20, 40 mg/kg
Administration:	Intraperitoneal injection (i.p.); Once daily for 12 days
Result:	Alleviated the downreg-ulation of PWL and promoted the behavior recovery in SNL rat model. Decreased the levels of IL-6, IL-1β and TNF-α. Increased the level of anti-inflammatory IL-10. Down-regulated the level of MDA.

CUSTOMER VALIDATION

- Apoptosis. 2022 Sep 20.
- J Orthop Res. 2023 Apr 25.

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REFERENCES

[1]. Dhakal H, et al. Inhibitory effects of orientin in mast cell-mediated allergic inflammation. Pharmacol Rep. 2020 Jan 24.

[2]. Guo D, et al. Orientin and neuropathic pain in rats with spinal nerve ligation. 61Int Immunopharmacol. 2018 May;58:72-79.

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

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