alpha-Cyperone

Cat. No.: HY-N0710

CAS No.: 473-08-5

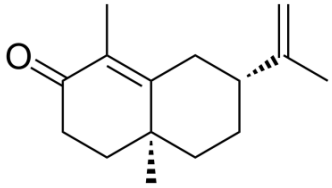
Molecular Formula: $C_{15}H_{22}O$

Molecular Weight: 218.33

Target: Endogenous Metabolite

Pathway: Metabolic Enzyme/Protease

Storage: Pure form -20°C 3 years
4°C 2 years
* The compound is unstable in solutions, freshly prepared is recommended.



SOLVENT & SOLUBILITY

In Vitro

Ethanol : 140 mg/mL (641.23 mM; Need ultrasonic)
DMSO : < 1 mg/mL (insoluble or slightly soluble)
H_2O : < 0.1 mg/mL (ultrasonic) (insoluble)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	4.5802 mL	22.9011 mL	45.8022 mL
5 mM	0.9160 mL	4.5802 mL	9.1604 mL
10 mM	0.4580 mL	2.2901 mL	4.5802 mL

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

In Vivo

1. Add each solvent one by one: 10% EtOH >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: 3.5 mg/mL (16.03 mM); Suspended solution; Need ultrasonic
2. Add each solvent one by one: 10% EtOH >> 90% (20% SBE-β-CD in saline)
   Solubility: 3.5 mg/mL (16.03 mM); Suspended solution; Need ultrasonic
3. Add each solvent one by one: 10% EtOH >> 90% corn oil
   Solubility: ≥ 3.5 mg/mL (16.03 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

alpha-Cyperone (α-Cyperone) is associated with the down-regulation of COX-2, IL-6, Nck-2, Cdc42 and Rac1, resulting in reduction of inflammation, which would be highly beneficial for treatment of inflammatory diseases such as AD.

IC_{50} & Target

Human Endogenous Metabolite

In Vitro

The anti-inflammatory activity of alpha-Cyperone (α-Cyperone) is associated with the down-regulation of COX-2 and IL-6 via

the negative regulation of the NFκB pathway in LPS-stimulated RAW 264.7 cells[1].
alpha-Cyperone (α-Cyperone) binds and interacts with tubulin and is capable of distinctly destabilizing microtubule polymerization. The effect of this interaction could result in reduction of inflammation which would be highly beneficial for treatment of inflammatory diseases such as AD. One microliter of alpha-Cyperone was dissolved in DMSO (1:1 v/v) and it was further diluted in double distilled water (ddH2O) to a final volume of 20 microliter[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Jung, S. H. et al. alpha-Cyperone, isolated from the rhizomes of Cyperus rotundus, inhibits LPS-induced COX-2 expression and PGE2 production through the negative regulation of NFkappaB signalling in RAW 264.7 cells. Journal of ethnopharmacology 147, 208-214, doi:10.1016/j.jep.2013.02.034 (2013).

[2]. Azimi, A. et al. alpha-Cyperone of Cyperus rotundus is an effective candidate for reduction of inflammation by destabilization of microtubule fibers in brain. Journal of ethnopharmacology, doi:10.1016/j.jep.2016.06.058 (2016).

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