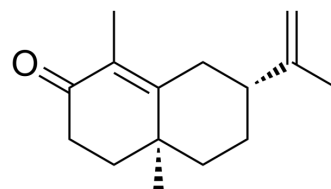


alpha-Cyperone

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 : 100 mg/mL (458.02 mM; Need ultrasonic)
 H₂O : < 0.1 mg/mL (ultrasonic) (insoluble)

	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	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

- 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
- 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
- Add each solvent one by one: 10% EtOH >> 90% corn oil
Solubility: ≥ 3.5 mg/mL (16.03 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.5 mg/mL (11.45 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (11.45 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (11.45 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.
IC₅₀ & 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 NF κ B 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 (ddH ₂ O) to a final volume of 20 microliter ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Aging (Albany NY). 2021 Jul 8;13(13):17690-17706.
- Immunopharmacol Immunotoxicol. 2022 Sep 2;1-10.

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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 NF κ B 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).

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

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