Tetrahydromagnolol

Cat. No.: HY-116637

CAS No.: 20601-85-8

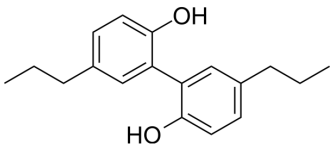
Molecular Formula: $C_{18}H_{22}O_2$

Molecular Weight: 270.37

Target: Cannabinoid Receptor; GPR55

Pathway: GPCR/G Protein; Neuronal Signaling

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



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (369.86 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	3.6986 mL	18.4932 mL	36.9864 mL
	5 mM	0.7397 mL	3.6986 mL	7.3973 mL
	10 mM	0.3699 mL	1.8493 mL	3.6986 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 (9.25 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (9.25 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (9.25 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Tetrahydromagnolol (Magnolignan), a main metabolite of Magnolol, is a potent and selective cannabinoid CB2 receptor agonist with an EC_{50} of 170 nM and a K_i of 416 nM. Tetrahydromagnolol possesses 20-fold more selective for CB2 receptor than CB1 receptor. Tetrahydromagnolol is also a weak GPR55 receptor antagonist[1].

IC_{50} & Target

CB2	CB2	CB1	CB1
170 nM (EC50)	416 nM (Ki)	9010 nM (EC50)	2260 nM (Ki)

GPR55 receptor

REFERENCES

[1]. Alexander Fuchs, et al. The natural product magnolol as a lead structure for the development of potent cannabinoid receptor agonists. PLoS One. 2013 Oct 30;8(10):e77739.

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