Methyldopa hydrate

Cat. No.: HY-B0225B

CAS No.: 41372-08-1

Molecular Formula: $C_{10}H_{16}NO_{5\cdot5}$

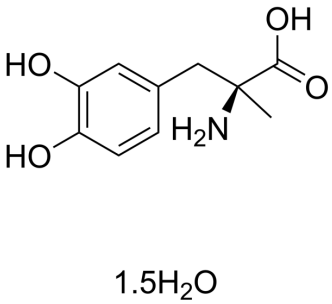
Molecular Weight: 238.24

Target: Adrenergic Receptor; Endogenous Metabolite

Pathway: GPCR/G Protein; Neuronal Signaling; Metabolic Enzyme/Protease

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 25 mg/mL (104.94 mM; Need ultrasonic)

H_2O : 1 mg/mL (4.20 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	4.1974 mL	20.9872 mL	41.9745 mL
5 mM	0.8395 mL	4.1974 mL	8.3949 mL
10 mM	0.4197 mL	2.0987 mL	4.1974 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 (10.49 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (10.49 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (10.49 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Methyldopa hydrate (L-(-)-α-Methyldopa hydrate), a potent antihyoertensive agent, is an alpha-adrenergic agonist (selective for α2-adrenergic receptors). Methyldopa hydrate is a proagent and is metabolized (α-Methylepinephrine) in the central nervous system[1][2].

IC_{50} & Target

α adrenergic receptor

In Vivo

Methyldopa hydrate (L-(-)-α-Methyldopa hydrate; 200 mg/kg; i.p.) decreases the hyperglycemic response in the first 2 hr after Dieldrin treatment[2].

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

Animal Model:	60-day-old male rats[2]
Dosage:	200 mg/kg
Administration:	i.p.
Result:	Decreased the plasma concentration of glucose in Dieldrin-exposed rats by 24% during the 30 min following its administration.

CUSTOMER VALIDATION

- Clin Chem. 2019 Dec;65(12):1522-1531.

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REFERENCES

[1]. Sweet CS. New centrally acting antihypertensive drugs related to methyldopa and clonidine. Hypertension. 1984;6(5 Pt 2):II51-II56.

[2]. Fox GR, et al. The effects of phenobarbital, atropine, L-alpha-methyldopa, and DL-propranolol on dieldrin-induced hyperglycemia in the adult rat. Toxicol Appl Pharmacol. 1985;78(3):342-350.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA