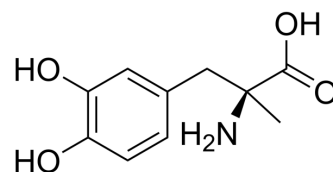


Methyl dopa hydrate

Cat. No.:	HY-B0225B		
CAS No.:	41372-08-1		
Molecular Formula:	C ₁₀ H ₁₆ NO _{5.5}		
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



1.5H₂O

SOLVENT & SOLUBILITY

In Vitro

DMSO : 25 mg/mL (104.94 mM; Need ultrasonic)
 H₂O : 1 mg/mL (4.20 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent Concentration	Mass		
		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

- 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
- 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
- Add each solvent one by one: 10% DMSO >> 90% corn oil
 Solubility: ≥ 2.5 mg/mL (10.49 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

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

IC₅₀ & 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.

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

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