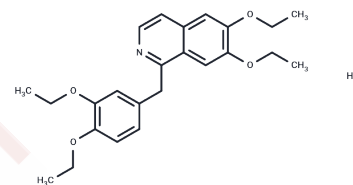


Ethaverine hydrochloride

Chemical Properties

CAS No. :	985-13-7
Formula:	C ₂₄ H ₃₀ ClNO ₄
Molecular Weight:	431.96
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



Biological Description

Description	Ethaverine hydrochloride is a homologue of papaverine and is used as a vasodilator and antispasmodic.[2]
Targets(IC50)	MAO,Calcium Channel,Monoamine Oxidase
In vitro	METHODS: The inhibitory effect of ethaverine on dopamine content in PC12 cells was studied. RESULTS Ethaverine reduced dopamine content in PC12 cells in a concentration-dependent manner. At a concentration of 1.0 μM, dopamine content was inhibited by 33.6% within 24-48 hours. The IC50 value of ethaverine was 1.4 μM. 2.0 μM ethaverine reduced dopamine content after 6 hours of action. Tyrosine hydroxylase (TH) was inhibited after 6 hours of ethaverine treatment in PC12 cells, and the activity remained at a reduced level until 36 hours (the inhibition rate was 12-22% at 2.0 μM). [1] Ethaverine (10 μM) treatment in PC12 cells reduces catecholamine secretion by blocking L-type voltage-sensitive Ca ²⁺ channels. [2]
In vivo	METHODS: In a short-term experiment on 11 guinea pigs, the effect of Ethaverine hydrochloride on cochlear microcirculation was observed (2/5 and /10 mg/kg, i.v) for 10 minutes. In these experiments, intracochlear PO ₂ , intracochlear potential (EP), cochlear microphonic (CM) potential, and blood pressure (BP) were recorded. Intracochlear PO ₂ was measured polarographically in the mid-level using gold electrodes. RESULTS Ethaverine hydrochloride at doses of 5 and 10 mg/kg caused a significant increase in intracochlear PO ₂ for 35 to 90 minutes, even with a temporary decrease in blood pressure. At the same time, this improvement in cochlear microcirculation was observed to coincide with an increase in CM potential. The decrease in EP may be the result of a decrease in blood pressure and a direct effect of Ethaverine hydrochloride on EP production. [3]

Solubility Information

Solubility	H ₂ O: 100 mg/mL (231.5 mM),Sonication is recommended. DMSO: 16 mg/mL (37.04 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.315 mL	11.5751 mL	23.1503 mL
5 mM	0.463 mL	2.315 mL	4.6301 mL
10 mM	0.2315 mL	1.1575 mL	2.315 mL
50 mM	0.0463 mL	0.2315 mL	0.463 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Shin JS, et al. Inhibitory effects of ethaverine, a homologue of papaverine, on dopamine content in PC12 cells. *Biol Pharm Bull.* 2001 Jan;24(1):103-5.

Suh BC, et al. Inhibition by ethaverine of catecholamine secretion through blocking L-type Ca²⁺ channels in PC12 cells. *Biochem Pharmacol.* 1994 Mar 29;47(7):1262-6.

Prazma J, et al. Effect of ethaverine hydrochloride on cochlear microcirculation. *Arch Otolaryngol.* 1981 Apr;107(4):227-9.

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