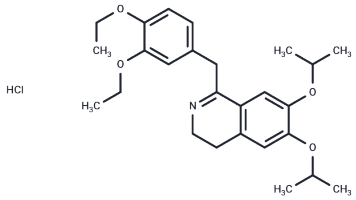
Data Sheet (Cat.No.T68853)

TargetMol
YOUR TARGET MOLECULES

Diproteverine HCl

Chemical Properties



CAS No. : 69373-88-2

Formula: C26H36ClNO4

Molecular Weight: 462.02

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	Diproteverine HCl is a novel calcium antagonist with antianginal properties, antispasmodic and vasoactive.
Targets(IC50)	Calcium Channel
In vitro	Diproteverine (1 μM; sheep Purkinje fibers) to reduce the amplitude of the slow action potential (IC30 = 2 μM) and to shorten the duration of the fast action potential at 50% repolarisation (IC30 = 2.5 μM). Papaverine was found to possess marginal membrane channel-blocking activity and to be much more potent than diproteverine as a cAMP-phosphodiesterase inhibitor (IC50 = 8 μM).[2]
In vivo	Diproteverine (0.25-0.75 mg/kg; i.e.; dog; at plasma levels within the assumed therapeutic range) dose-relatedly decreases heart rate, increases corrected sinus node recovery time, and decreases Wenckebach point. These effects are observed at plasma levels ranging between 16.2 +/- 4.1 and 144.7 +/- 12.5 ng/ml. After cholinergic blockade with N-methylscopolammonium, diproteverine lowers heart rate (greater than or equal to 0.25 mg/kg), increases corrected sinus node recovery time, and decreases Wenckebach point (greater than or equal to 0.5 mg/kg). After propranolol, diproteverine only significantly reduces corrected sinus node recovery time 5 min after the third administration (0.75 mg/kg). After pharmacologic autonomic blockade by N-methylscopolammonium propranolol combination, diproteverine lowers the intrinsic heart rate (greater than or equal to 0.25 mg/kg) and Wenckebach point (greater than or equal to 0.5 mg/kg). Diproteverine does not modify mean blood pressure. These results show that diproteverine administered with and without pharmacologic autonomic blockade in the conscious dog causes dose-related depressant effects on sinus node function and atrioventricular conduction without producing significant vasodilatation.[1]

Solubility Information

Solubility	DMSO: 55 mg/mL (119.04 mM) (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.1644 mL	10.822 mL	21.6441 mL
5 mM	0.4329 mL	2.1644 mL	4.3288 mL
10 mM	0.2164 mL	1.0822 mL	2.1644 mL
50 mM	0.0433 mL	0.2164 mL	0.4329 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.

Reference

Kantelip JP, et al. Effects of diproteverine, a new calcium antagonist on sinoatrial node and atrioventricular conduction in conscious unsedated dogs. J Cardiovasc Pharmacol. 1988;12(4):432-437.