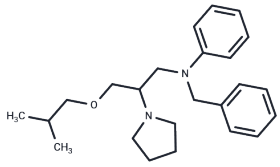
Data Sheet (Cat.No.T5391)

TargetMol

Bepridil hydrochloride

Chemical Properties



CAS No. :	68099-86-5
Formula:	C24H35ClN2O
Molecular Weight:	403
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	Bepridil hydrochloride (CERM 1978) is a calcium channel blocker that also inhibits Na+/Ca2+ exchange (NCX), sodium channels, and cardiac sarcolemmal KATP channels.
Targets(IC50)	Calcium Channel
In vitro	Bepridil (1-100 microM) inhibited the K(ATP) channel current in a concentration-dependent manner. The IC(50) value of bepridil was estimated to be 10.5 microM for outward K(ATP) channel currents (holding potential, +60 mV) and 6.6 microM for inward K(ATP) channel currents (holding potential, -60 mV). Bepridil (0.1-30 microM) also inhibited K(Na) channel currents measured at the holding potential of -60 mV, in a concentration-dependent manner with an IC(50) value of 2.2 microM [2].
In vivo	The predominant effects of Bepridil (cumulative dose = 9.0 mg/kg i.v.) in the conscious rat were reduced coronary vascular resistance and heart rate. Bepridil showed selectivity for the coronary circulation since systemic vascular resistance was not significantly reduced until cumulative i.v. dosage of 21.0 mg/kg was administered [1].

Solubility Information

Solubility	DMSO: 250 mg/mL (620.35 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 4 mg/mL (9.93 mM),Sonication is recommended. 10% DMSO+90% Saline: 10 mg/mL (24.81 mM),Solution. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.4814 mL	12.4069 mL	24.8139 mL
5 mM	0.4963 mL	2.4814 mL	4.9628 mL
10 mM	0.2481 mL	1.2407 mL	2.4814 mL
50 mM	0.0496 mL	0.2481 mL	0.4963 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

Flaim SF, et al. Effects of bepridil hydrochloride on cardiocirculatory dynamics, coronary vascular resistance, and cardiac output distribution in normal, conscious rats. J Cardiovasc Pharmacol. 1988 Mar;11(3):363-72.
Qiu M, Li Z, Chen Y, et al. Tolcapone Potently Inhibits Seminal Amyloid Fibrils Formation and Blocks Entry of Ebola Pseudoviruses. Frontiers in Microbiology. 2020, 11: 504
Li Y, et al. Bepridil blunts the shortening of action potential duration caused by metabolic inhibition via blockade of ATP-sensitive K(+) channels and Na(+)-activated K(+) channels. J Pharmacol Exp Ther. 1999 Nov;291(2):562-8.
Qiu M, Li Z, Chen Y, et al. Tolcapone Potently Inhibits Seminal Amyloid Fibrils Formation and Blocks Entry of Ebola Pseudoviruses. Frontiers in Microbiology. 2020, 11: 504.