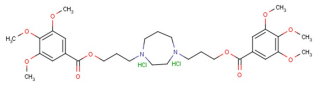
Data Sheet (Cat.No.T15130)

TargetMol
A DRUG SCREENING EXPERT

Dilazep dihydrochloride

Chemical Properties



CAS No.:	20153-98-4
Formula:	C31H46Cl2N2O10
Molecular Weight:	677.61
Appearance:	N/A
Storage:	0-4℃ for short term (days to weeks), or -20℃ for long term (months).

Biological Description

Description	Dilazep dihydrochloride is an adenosine uptake inhibitor. It also inhibits ischemic damage, membrane transport of nucleosides, and platelet aggregation. It has cerebral and coronary vasodilating action through the enhancement of the effect of adenosine.
Targets(IC_{50})	Adenosine uptake: None
In vitro	Dilazep, NBI, and Dipyridamole inhibit the uptake of adenosine into different cells. In these compounds, Dilazep and NBI are almost 10 times more effective than Dipyridamole. Only Dilazep is water-soluble and no solubility aiding organic solvent is needed for preparing an aqueous solution [1].
In vivo	Dilazep inhibits the phospholipase activation in reperfused heart mitochondria and also inhibits the lipid peroxidation caused by cerebral ischemia and reperfusion. Dilazep may prevent ischemic cerebral injury due to an increase in cerebral blood flow and/or its protective effects on the vascular endothelial cell membrane. After administration of Dilazep, even low doses (0.04-0.1 mg/kg/min) of exogenous adenosine significantly increase superior mesenteric arterial conductance (SMAC) and elevates arterial plasma adenosine concentration. The increased adenosine levels were highly correlated with the increased percentage of change of SMAC and values for Rmax and EC50 were 193.4% change of SMAC and 2.8 μM, respectively. Administration of bolus doses of 8-phenyltheophylline abolishes the ability of Dilazep to potentiate vasodilation. However, it did not affect isoproterenol-induced relaxation [1].

Solubility Information

Solubility	< 1 mg/ml refers to the product slightly soluble or insoluble

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.476 mL	7.379 mL	14.758 mL
5 mM	0.295 mL	1.476 mL	2.952 mL
10 mM	0.148 mL	0.738 mL	1.476 mL
50 mM	0.03 mL	0.148 mL	0.295 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 ℃ for 6 months; - 20 ℃ for 1 month. Please use it as soon as possible.

Reference

1. Zhang Y, et al. Dilazep potentiation of adenosine-mediated superior mesenteric arterial vasodilation. J Pharmacol Exp Ther. 1991 Sep;258(3):767-71.

2. Kawagoe J, et al. Effect of dilazep dihydrochloride against ischemia and reperfusion-induced disruption of blood-brain barrier in rats: a quantitative study. Naunyn Schmiedebergs Arch Pharmacol. 1992 Apr;345(4):485-8.

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