Data Sheet (Cat.No.T27632)

TargetMol

Isomazole

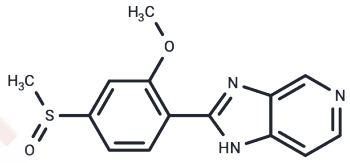
Chemical Properties

CAS No. : 86315-52-8

Formula: C14H13N3O2S

Molecular Weight: 287.34

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	Isomazole is a novel orally available phosphodiesterase (PDE) inhibitor with calcium-sensitizing properties that inhibits PDE3 and PDE4.
Targets(IC50)	PDE
In vivo	Isomazole (10 and 20 micrograms/kg/min;) to 10 awake dogs with right-sided congestive heart failure produced by pulmonary artery constriction and tricuspid valve avulsion found that increased cardiac output, heart rate, right ventricular and left ventricular (LV) dP/dt, LVdP/dt/P and decreased aortic pressure and total peripheral vascular resistance. Simultaneously, blood flow increased to myocardium, quadriceps muscle, brain and splanchnic beds, whereas vascular resistance decreased. Furthermore, Isomazole increased LV oxygen consumption and decreased trans-coronary arteriovenous oxygen difference. Angiotensin II was infused to restore mean aortic pressure to base-line values during Isomazole infusion; however, despite the return of aortic pressure to base-line values, cardiac output, LVdP/dt, and LVdP/dt/P remained elevated. The systemic and regional hemodynamic effects of Isomazole were unaffected by pretreatment with propranolol and mecamylamine. Thus, Isomazole exerted positive inotropic, chronotropic, and vasodilator effects in congestive heart failure dogs. The inotropic effect of Isomazole was independent of the decrease in aortic pressure, and the hemodynamic effects of Isomazole were not mediated via the autonomic nervous system. Furthermore, the decrease in trans-coronary arteriovenous oxygen difference suggests that Isomazole exerted an active coronary vasodilator action which may improve the myocardial oxygen demand/supply ratio.[2]

Solubility Information

Solubility	DMSO: 60 mg/mL (208.81 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.4802 mL	17.401 mL	34.802 mL
5 mM	0.696 mL	3.4802 mL	6.9604 mL
10 mM	0.348 mL	1.7401 mL	3.4802 mL
50 mM	0.0696 mL	0.348 mL	0.696 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

Hayes JS, et al. Roles for Ca++ and cyclic AMP in mediating the cardiotonic actions of isomazole (LY175326). J Pharmacol Exp Ther. 1986;237(1):18-24.
Imai N, et al. Systemic and regional hemodynamic effects of isomazole in awake dogs with congestive heart failure. J Pharmacol Exp Ther. 1987;241(1):20-26.
Tuininga YS, et al. Exploratory study of the effects of single doses of isomazole on hemodynamics and heart rate variability parameters in chronic heart failure. J Cardiovasc Pharmacol. 1995;25(1):81-86.
Sandusky GE, et al. Acute, subchronic, and chronic toxicity of the cardiotonic isomazole in rats. Fundam Appl Toxicol. 1989;13(3):409-417.