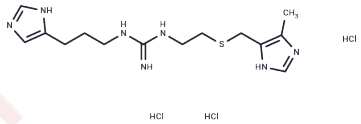
Data Sheet (Cat.No.T68921)

TargetMol

Impromidine hydrochloride

Chemical Properties



CAS No. : 65573-02-6

Formula: C14H26Cl3N7S

Molecular Weight: 430.83

Storage: Store under nitrogen
Pure form: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Impromidine hydrochloride is a very potent and specific histamine H2 receptor agonist for conducting cardiovascular studies.
Targets(IC50)	Histamine Receptor
In vitro	Impromidine hydrochloride (1 X 10(-4) M; human isolated left ventricular) inhibited maximal responses to histamine to a level equal to the maximal Impromidine hydrochloride response; however, Impromidine hydrochloride did not inhibit responses to isoprenaline. Positive inotropic activity and inhibition of maximal responses to histamine occurred over a similar Impromidine hydrochloride concentration range. Impromidine hydrochloride displaced histamine concentration-response curves to the right, whereas mepyramine had no effect on responses to histamine. It is concluded that Impromidine hydrochloride has positive inotropic activity on the human ventricle, that the response is mediated via histamine H2-receptors, and that Impromidine hydrochloride is a partial agonist compared with histamine.[2]
In vivo	Impromidine hydrochloride (0.46 to 46 nmol/kg/h; dog; 45-min steps) produced the same maximum stimulation of gastric HCI output, increase of HR, and fall in systolic blood pressure as histamine. Impromidine hydrochloride was 38 times more potent than histamine in the stimulation of acid (ED50 3.8 nmol/kg/h) and 30 times more potent in raising HR (ED50 5.6 vs. 172 nmol/kg.hr). The effects of Impromidine hydrochloride on pepsin secretion were qualitatively and quantitatively similar to those of histamine and other H-2 agonists with weak stimulation at low doses and progressive inhibition with increasing doses of Impromidine hydrochloride. Coupling the results with the known high specificity of Impromidine hydrochloride, gastric acid secretion, chronotropic, and hypotension all seem to be purely H-2-mediated effects of histamine in the intact conscious dog.[1]

Solubility Information

Solubility	DMSO: 27.5 mg/mL (63.83 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.3211 mL	11.6055 mL	23.211 mL
5 mM	0.4642 mL	2.3211 mL	4.6422 mL
10 mM	0.2321 mL	1.1606 mL	2.3211 mL
50 mM	0.0464 mL	0.2321 mL	0.4642 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

Molina E, et al. Use of impromidine to define specific histamine H-2 effects on gastric secretion, heart rate and blood pressure in conscious dogs. J Pharmacol Exp Ther. 1980;214(3):483-487.
English TA, et al. Impromidine is a partial histamine H2-receptor agonist on human ventricular myocardium. Br J Pharmacol. 1986;89(2):335-340.
Aksulu HE, et al. A comparative study with impromidine (SKF 92676), a potent agonist for histamine H2-receptors. Agents Actions. 1979;9(5-6):461-466.