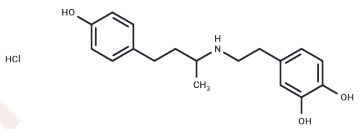
Data Sheet (Cat.No.T8149)

TargetMol

Dobutamine hydrochloride

Chemical Properties



CAS No. : 49745-95-1

Formula: C18H24ClNO3

Molecular Weight: 337.84

Storage: Store at low temperature
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	Dobutamine hydrochloride (Dobutamine (hydrochloride)) is a catecholamine that acts as a β-adrenergic receptor agonist with potent positive inotropic effects.
Targets(IC50)	Adrenergic Receptor
In vivo	In wildtype mice increasing doses of dobutamine resulted in subsequent increase in the left ventricular function and heart rate acceleration, but significant inotropic, lusitropic, and chronotropic cardiac response was observed only after high doses of dobutamine.
Animal Research	Animal Model:Tgαq*44 mice (heart failure models). Dosage:0.15 mg/kg, 0.5 mg/kg as a low dose, 1.5 mg/kg, 5 mg/kg, 20 mg/kg as a high dose. Administration:Intraperitoneal injection

Solubility Information

Solubility	H2O: 20 mg/mL (59.2 mM),Sonication is recommended. DMSO: 65 mg/mL (192.4 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: 2 mg/mL (5.92 mM),Sonication is recommended. *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	2.960 mL	14.7999 mL	29.5998 mL
5 mM	0.592 mL	2.960 mL	5.920 mL
10 mM	0.296 mL	1.480 mL	2.960 mL
50 mM	0.0592 mL	0.296 mL	0.592 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

Tyrankiewicz U , et al. Characterization of the cardiac response to a low and high dose of dobutamine in the mouse model of dilated cardiomyopathy by MRI in vivo. J Magn Reson Imaging. 2013 Mar;37(3):669-77.
Vallet B, et al. Dobutamine: mechanisms of action and use in acute cardiovascular pathology. Ann Cardiol Angeiol (Paris). 1991 Jun;40(6):397-402.