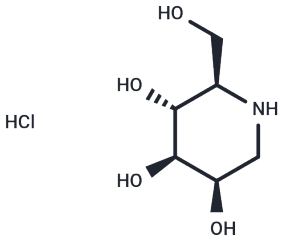
Data Sheet (Cat.No.T22468)

TargetMol

1-Deoxymannojirimycin hydrochloride

Chemical Properties



CAS No. : 73465-43-7

Formula: C6H14ClNO4

Molecular Weight: 199.63

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	1-Deoxymannojirimycin hydrochloride, a selective α1,2-mannosidase inhibitor (IC50: 20 μM), also inhibits HIV-1 strains but exhibits poor antiviral activity.
Targets(IC50)	HIV Protease,Influenza Virus
In vitro	Exposure of such mutant virus strains to 1-Deoxymannojirimycin results in an enhanced suppression of mutant virus-induced cytopathicity in CEM cell cultures[1].When combined with CBAs at concentrations that showed poor if any suppression of mutant virus replication as single drugs, a synergistic antiviral activity of 1-Deoxymannojirimycin was observed[1].

Solubility Information

Solubility	DMSO: 20 mg/mL (100.19 mM),Sonication is recommended. H2O: 20 mg/mL (100.19 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 (10.02 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	5.0093 mL	25.0463 mL	50.0927 mL
5 mM	1.0019 mL	5.0093 mL	10.0185 mL
10 mM	0.5009 mL	2.5046 mL	5.0093 mL
50 mM	0.1002 mL	0.5009 mL	1.0019 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

Jan Balzarini, et al. The alpha(1,2)-mannosidase I Inhibitor 1-deoxymannojirimycin Potentiates the Antiviral Activity of Carbohydrate-Binding Agents Against Wild-Type and Mutant HIV-1 Strains Containing Glycan Deletions in gp120. FEBS Lett. 2007 May 15;581(10):2060-4.

F Vallee, et al. Structural Basis for Catalysis and Inhibition of N-glycan Processing Class I Alpha 1,2-mannosidases. J Biol Chem. 2000 Dec 29;275(52):41287-98.

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