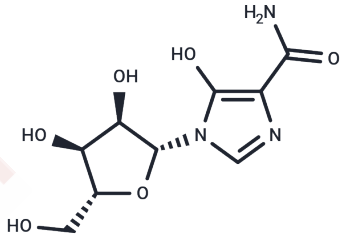
Data Sheet (Cat.No.T1188)

TargetMol

Mizoribine

Chemical Properties



CAS No. : 50924-49-7

Formula: C9H13N3O6

Molecular Weight: 259.22

Storage: Keep away from moisture
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	Mizoribine (NSC-289637) belongs to the family of 1-Ribosyl-imidazolecarboxamides. Mizoribine has been investigated for the treatment of Rheumatoid Arthritis.
Targets(IC50)	HCV Protease,Antibiotic,Parasite,SARS-CoV,Tyrosinase
In vitro	Mizoribine selectively inhibits guanine ribonucleotide synthesis in purified T-cells, while the mechanism of 6-thioguanine (6MP) appears to rely more on the depletion of adenine ribonucleotides. In a dose-dependent manner, Mizoribine at 1-50 mg/mL suppresses T-cell proliferation induced by all tested stimuli by 10-100%. This suppression is reversible with the addition of guanosine to replenish the guanine nucleotide pool when 50 mM is incorporated. Furthermore, Mizoribine impedes HCV RNA replication with an IC50 of 100 μM and causes a reduction in intracellular GTP levels, with GTP supplementation reversing its antiproliferative effect.
In vivo	Administration of 5 or 10 mg/kg Mizoribine resulted in increased expression of MCP-1, OPN, and TGF-β1 mRNA in untreated OLETF rats. Simultaneously, this dose of Mizoribine inhibited urinary albumin excretion and attenuated the progression of glomerulosclerosis, renal interstitial fibrosis, and macrophage infiltration in the rat kidneys.

Solubility Information

Solubility	DMSO: 166.7 mg/mL (643.08 mM),Sonication is recommended. Ethanol: < 1 mg/mL (insoluble or slightly soluble), H2O: 47 mg/mL (181.31 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: 10 mg/mL (38.58 mM),Solution. 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (7.72 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	3.8577 mL	19.2886 mL	38.5773 mL
5 mM	0.7715 mL	3.8577 mL	7.7155 mL
10 mM	0.3858 mL	1.9289 mL	3.8577 mL
50 mM	0.0772 mL	0.3858 mL	0.7715 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

Turka LA, et al. J Clin Invest, 1991, 87(3), 940-948.
Dayton JS, et al. Mol Pharmacol, 1992, 41(4), 671-676.
Naka K, et al. Biochem Biophys Res Commun, 2005, 330(3), 871-879.
Kikuchi Y, et al. Nephrol Dial Transplant, 2005, 20(8), 1573-1581.