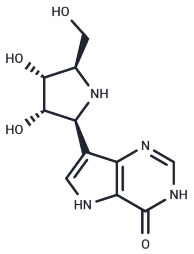
Data Sheet (Cat.No.T15337)

TargetMol

Forodesine

Chemical Properties



CAS No. : 209799-67-7

Formula: C11H14N4O4

Molecular Weight: 266.25

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	Forodesine (BCX-1777) is an orally active and potent purine nucleoside phosphorylase (PNP) inhibitor, a new purine nucleoside analog, inhibitor of human lymphocyte proliferation, induces apoptosis in leukemic cells by increasing dGTP levels, and may be useful in the study of cutaneous T-cell lymphomas.
Targets(IC50)	Apoptosis,Nucleoside Antimetabolite/Analog
In vitro	Formodicin (10-30 μM; 24 and 48 hours; RPMI-8226, MOLT-4 and 5T33MM cells) has no effect on MM cells at 24 hours, but decreases the percentage of viable cells in MOLT-4 cells by 40% [1]. Treatment with forodosine (10-30 μM; 24 and 48 h; RPMI-8226, MOLT-4 and 5T33MM cells) partially inhibited cell proliferation [1]. In the presence of 2'-deoxyguanosine (dGuo, 3-10 μM), fordifloxacin inhibits the proliferation of human lymphocytes activated by a variety of drugs such as interleukin-2 (IL-2), mixed lymphocyte reaction (MLR) and phytohemagglutinin (PHA) (IC50 values less than 0.1-0.38 μM) [2].
In vivo	Forodesine has excellent oral bioavailability (63%) in mice[2]. Forodesine(single dose of 10 mg/kg; in mice) treatment, elevates dGuo to approximately 5 μM[2]. Forodesine is effective in prolonging the life span 2-fold or more, in the human peripheral blood lymphocyte severe combined immunodeficiency (hu-PBL-SCID) mouse model[2].

Solubility Information

Solubility	DMSO: 80 mg/mL (300.47 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: 3.3 mg/mL (12.39 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	3.7559 mL	18.7793 mL	37.5587 mL
5 mM	0.7512 mL	3.7559 mL	7.5117 mL
10 mM	0.3756 mL	1.8779 mL	3.7559 mL
50 mM	0.0751 mL	0.3756 mL	0.7512 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

Bieghs L, et al. The effects of forodesine in murine and human multiple myeloma cells. Adv Hematol. 2010;2010: 131895.

Bantia S, et al. Purine nucleoside phosphorylase inhibitor BCX-1777 (Immucillin-H)--a novel potent and orally active immunosuppressive agent. Int Immunopharmacol. 2001 Jun;1(6):1199-210.