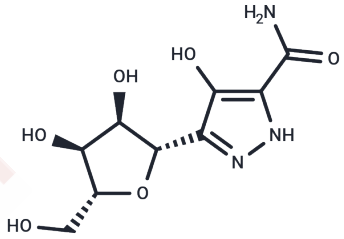
Data Sheet (Cat.No.T16690)

TargetMol

Pyrazofurin

Chemical Properties



CAS No. : 30868-30-5

Formula: C9H13N3O6

Molecular Weight: 259.22

Storage: Keep away from moisture,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	Pyrazofurin is a pyrimidine nucleoside analogue that potently inhibits cell proliferation and DNA synthesis by targeting UMP synthase, while also acting as a highly sensitive orotate-phosphoribosyltransferase inhibitor with IC50 values ranging from 0.06 to 0.37 μM in Hep-2, HNSCC-14B, and HNSCC-14C cell lines, supporting the use of Pyrazofurin as a mechanistic probe for nucleotide biosynthesis inhibition and antiproliferative research.
Targets(IC50)	Proton pump,Dehydrogenase
In vitro	In head and neck cancer cell lines, specifically HEP-2, UMSCC-14B, and UMSCC-14C, Pyrazofurin exhibited potent antiproliferative activity with IC50 values ranging from 0.06 to 0.37 μM[2]. In Vero cells, Pyrazofurin displayed broad-spectrum antiviral activity against Parainfluenza 3, Measles, Vaccinia, and Herpes Simplex Virus type 2 (HSV-2) with ED50 values ranging from 2.8 to 20 μM following a 72-hour incubation [3].

Solubility Information

Solubility	H2O: 4 mg/mL (15.43 mM),Sonication is recommended. DMSO: 40 mg/mL (154.31 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

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

Ringer DP, et al. Alteration in de novo pyrimidine biosynthesis during uridine reversal of pyrazofurin-inhibited DNA synthesis. Neuropsychopharmacology. J Biochem Toxicol. 1991 Spring;6(1):19-27.
Peters GJ, et al. Antipyrimidine effects of five different pyrimidine de novo synthesis inhibitors in three head and neck cancer cell lines. Nucleosides Nucleotides Nucleic Acids. 2018;37(6):329-339.
Petrie CR 3rd, et al. Synthesis and biological activity of certain nucleoside and nucleotide derivatives of pyrazofurin. J Med Chem. 1986 Feb;29(2):268-78.
Canonico PG, et al. Antiviral efficacy of pyrazofurin against selected RNA viruses. Antiviral Res. 1982 Dec;2(6):331-7.