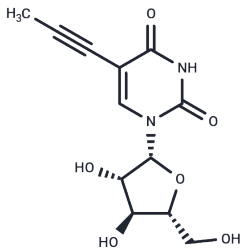
Data Sheet (Cat.No.T60540)

TargetMol

Netivudine

Chemical Properties



CAS No. : 84558-93-0

Formula: C12H14N2O6

Molecular Weight: 282.25

Storage: 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	Netivudine is a potent nucleoside reverse transcriptase inhibitor (NRTIs), a nucleoside analogue with anti-varicella zoster virus activity that can be used to treat human immunodeficiency virus (HIV) infection. Netivudine works by inhibiting reverse transcriptase, which reduces viral load in the body and slows the progression of the disease through its inhibitory effect.
Targets(IC50)	Nucleoside Antimetabolite/Analog,HSV
In vitro	The phosphorylation of netivudine in VZV infected human cells is similar to that of sorivudine and the IC50 of netivudine for VZV ranges from 06-3.8 uM. Since, in HSV-infected cells, only the monophosphate is formed, netivudine shows no appreciable in vitro activity against HSV or other human herpesviruses.[1]
In vivo	The half-life of netivudine in humans is about 12-15 hand preliminary pharmacokinetic studies, employing oral doses of netivudine at 100 mg, 200 mg and 400 mg in young adults and healthy elderly volunteers, confirmed that concentrations of the drug substantially above the IC50 for VZV could be achieved and sustained with twice daily dosing.[2] The drug bioavailability was 21.1% and 24.6% in the young and elderly, respectively. An initial, open, dose-ranging study of netivudine in 31 elderly immunocompetent patients with localised herpes zoster with oral doses up to 200mg twice daily showed therapeutic benefits upon rash healing and pain and no significant adverse effects.[3]

Solubility Information

Solubility	DMSO: 55 mg/mL (194.86 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.543 mL	17.7148 mL	35.4296 mL
5 mM	0.7086 mL	3.543 mL	7.0859 mL
10 mM	0.3543 mL	1.7715 mL	3.543 mL
50 mM	0.0709 mL	0.3543 mL	0.7086 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

Rahim S G, et al. 5-Alkynyl pyrimidine nucleosides as potent selective inhibitors of varicella-zoster virus. Antiviral Chemistry and Chemotherapy. 1992;3(5): 293-297.
Peck RW, et al. The bioavailability and disposition of 1-(beta-D-arabinofuranosyl)-5-(1-propynyl)uracil (882C87), a potent, new anti-varicella zoster virus agent. Br J Clin Pharmacol. 1995;39(2):143-149.
Wood MJ, et al. Preliminary pharmacokinetics and safety of 882C87 in patients with herpes zoster. J Med Virol. 1993;1:154-157.

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