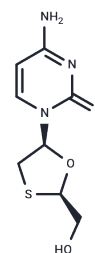


Lamivudine

Chemical Properties

CAS No. :	134678-17-4
Formula:	C ₈ H ₁₁ N ₃ O ₃ S
Molecular Weight:	229.26
Appearance:	no data available
Storage:	store at low temperature
	Powder: -20°C for 3 years In solvent: -80°C for 1 year



Biological Description

Description	Lamivudine (BCH-189) is a reverse transcriptase inhibitor and ZALCITABINE analog in which a sulfur atom replaces the 3' carbon of the pentose ring. It is used to treat HIV disease.
Targets(IC50)	HIV Protease,Reverse Transcriptase
In vivo	Lamivudine exhibits selective inhibitory activity against deoxycytidine kinase, an unusual substrate for the non-natural L-isomer of dNTPs preferred by HBV polymerase. The anti-HBV activity of PCV is attributed to the broad substrate specificity of deoxycytidine kinase and an unusual substrate preference of HBV polymerase for the non-natural L-conformation of dNTPs. The anti-HBV efficacy of PCV appears to rely on multiple factors, including optimal phosphorylation (sufficient for antiviral activity but not cytotoxicity), the extended intracellular half-life of PCV-TP, and the ability of PCV-TP to inhibit the initiation of HBV RT as well as its RT and DNA polymerase activities. Combined use of Lamivudine and Cidofovir synergistically inhibits replication of duck hepatitis B virus and is more effective in reducing the persistent covalently closed circular (CCC) DNA form of DHBV than when used separately. In PBMCs, Lamivudine inhibits HIV-1 p24 antigen production with ED50s ranging from 0.07 μM to 0.2 μM.

Solubility Information

Solubility	DMSO: 55 mg/mL (239.9 mM), Ethanol: < 1 mg/mL (insoluble or slightly soluble), H ₂ O: 42 mg/mL (183.2 mM), (< 1 mg/ml refers to the product slightly soluble or insoluble)
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A DRUG SCREENING EXPERT

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.3619 mL	21.8093 mL	43.6186 mL
5 mM	0.8724 mL	4.3619 mL	8.7237 mL
10 mM	0.4362 mL	2.1809 mL	4.3619 mL
50 mM	0.0872 mL	0.4362 mL	0.8724 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.

Reference

Shaw T, et al. J Viral Hepat, 1999, 6(2), 89-106.

Xie B, Sun D, Du Y, et al. A two-step lineage reprogramming strategy to generate functionally competent human

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