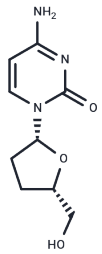
Data Sheet (Cat.No.T0110)

TargetMol

Zalcitabine

Chemical Properties



CAS No. : 7481-89-2

Formula: C9H13N3O3

Molecular Weight: 211.22

Storage: Store at low temperature,Store under nitrogen
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	Zalcitabine (Dideoxycytidine)(Dideoxycytidine;ddC; 2', 3'-Dideoxycytidine) is a nucleoside analog reverse transcriptase inhibitor (NRTI); At low concentrations, It can potently inhibit HIV replication by binding to reverse transcriptase terminated synthesis of viral DNA chain.
Targets(IC50)	HIV Protease,Reverse Transcriptase
In vitro	Zalcitabine is a dideoxynucleoside antiretroviral agent that is phosphorylated to the active metabolite 2',3'-dideoxycytidine 5'-triphosphate (ddCTP) in both uninfected and HIV-infected cells. At therapeutic concentrations, ddCTP inhibits HIV replication by targeting reverse transcriptase and terminating the elongation of proviral DNA. Zalcitabine also inhibits the cellular uptake of [3H]-PAH in CHO/hOAT1 cells, with an IC50 value of 1.23 mM, and its uptake increases threefold with enhanced hOAT1 activity in these cells.

Solubility Information

Solubility	DMSO: 74 mg/mL (350.35 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: 2 mg/mL (9.47 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	4.7344 mL	23.672 mL	47.344 mL
5 mM	0.9469 mL	4.7344 mL	9.4688 mL
10 mM	0.4734 mL	2.3672 mL	4.7344 mL
50 mM	0.0947 mL	0.4734 mL	0.9469 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

Adkins JC, et al. Zalcitabine. An update of its pharmacodynamic and pharmacokinetic properties and clinical efficacy in the management of HIV infection.Drugs. 1997 Jun;53(6):1054-80.
Jin MJ, et al. Interaction of zalcitabine with human organic anion transporter 1. Pharmazie. 2006 May;61(5):491-2.