Product Data Sheet

Product Name: Stavudine sodium
Cat. No.: GC37690

Chemical Properties

Cas. No.	134624-73-0		
SMILES	[O-]C[C@H]1O[C@@H](N2C=C(C)C(NC2=O)=O)C=C1.[Na+]		
Formula	$C_{10}H_{11}N_2NaO_4$	M.Wt	246.2
Solubility	Soluble in DMSO	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	Stavudine sodium		

Background

Stavudine is an inhibitor of HIV reverse transcriptase and a derivative of the nucleoside thymidine .[1] It inhibits HIV-1 replication in human peripheral blood mononuclear cells (PBMCs; EC_{50} = 8.8 nM). Stavudine reduces the synthesis of HIV-specific antigen in MT-4 cells when used at concentrations ranging from 0.1 to 10 ?g/ml and reduces HIV-induced plaque formation in MT-4 cells at 0.05 ?g/ml.[2] It reduces plasma- and cell-associated viral load in macaques infected with a highly pathogenic isolate of HIV-2.[3] Stavudine induces sustained hind paw mechanical allodynia in a rat model of antiretroviral toxic neuropathy (ATN) when administered at a dose of 75 mg/kg twice weekly for five consecutive doses for a cumulative dose of 375 mg/kg.[4] Formulations containing stavudine, in combination with other antiretrovirals, have been used in the treatment of HIV-1 infection.

1.Lin, T.-S., Schinazi, R.F., and Prusoff, W.H.Potent and selective in vitro activity of 3'-deoxythymidin-2'-ene (3'-deoxy-2',3'-didehydrothymidine) against human immunodeficiency virusBiochem. Pharmacol.36(17)2713-2718(1987) 2.Hamamoto, Y., Nakashima, H., Matsui, T., et al.Inhibitory effect of 2',3'-didehydro-2',3'-

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dideoxynucleosides on infectivity, cytopathic effects, and replication of human immunodeficiency virusAntimicrob. Agents Chemother.31(6)907-910(1987) 3.Watson, A., McClure, J., Ranchalis, J., et al.Early postinfection antiviral treatment reduces viral load and prevents CD4+ cell decline in HIV type 2-infected macaquesAIDS Res. Hum. Retroviruses13(16)1375-1381(1997) 4.Kuo, A., Nicholson, J.R., Corradini, L., et al.Establishment and characterisation of a stavudine (d4T)-induced rat model of antiretroviral toxic neuropathy (ATN) using behavioural and pharmacological methodsInflammopharmacology27(2)387-396(2019)

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