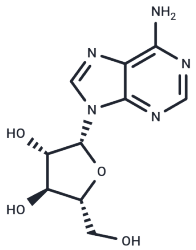
Data Sheet (Cat.No.T1506)

TargetMol
YOUR TARGET MOLECULES

Vidarabine

Chemical Properties



CAS No. : 5536-17-4

Formula: C10H13N5O4

Molecular Weight: 267.24

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	Vidarabine (Adenine Arabinoside) is a nucleoside antibiotic isolated from Streptomyces antibioticus. It has some antineoplastic properties and has broad spectrum activity against DNA viruses in cell cultures and significant antiviral activity against infections caused by a variety of viruses such as the herpes viruses, the VACCINIA VIRUS and varicella zoster virus.
Targets(IC50)	Nucleoside Antimetabolite/Analog,Tyrosine Kinases,DNA/RNA Synthesis,Antibiotic,HSV
In vitro	Vidarabine and Acyclovir have a synergistic effect on wild type . Vidarabine is capable of inhibiting acyclovir-resistant/TK-deficient mutants of HSV and VZV, because it is phosphorylated to its active vidarabine-triphosphate form by cellular kinases and is not dependent for its activation on the viral TK. [1] Vidarabine and acyclovir (ACV) alone show a concentration-dependent inhibition of plaque formation of HSV-1 in Vero cells. Vidarabine combined with acidic protein bound polysaccharide (APBP) show synergistic effects on the plaque formation of HSV-1 in Vero cells. [2] Vidarabine acts directly on the DNA polymerase of varicella-zoster virus (VZV) and double-strand DNA viruses, including human adenoviruses. Vidarabine specifically inhibits adenovirus type 11 replication without obvious cytotoxicity in vitro. Vidarabine acts less on the synthesis of early proteins but rather on those after DNA replication. [3] Vidarabine is an antiviral drug with activity against herpes viruses, poxviruses, and certain rhabdoviruses, hepadnarviruses, and RNA tumor viruses. Vidarabine also is active against vaccinia virus both in vitro and in vivo. [4]
In vivo	Vidarabine is rapidly deaminated to 9-β-D-arabinofuranosyl hypoxanthine (Ara-Hx) as the principal metabolite. [3]

Solubility Information

Solubility	H2O: 3 mg/mL (11.22 mM), Ethanol: < 1 mg/mL (insoluble or slightly soluble), DMSO: 49 mg/mL (183.4 mM), (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.742 mL	18.7098 mL	37.4195 mL
5 mM	0.7484 mL	3.742 mL	7.4839 mL
10 mM	0.3742 mL	1.871 mL	3.742 mL
50 mM	0.0748 mL	0.3742 mL	0.7484 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

Li L, Zhang Y, Chen Z, et al.SIRT1-dependent mitochondrial biogenesis supports therapeutic effects of vidarabine against rotenone-induced neural cell injury.Heliyon.2023