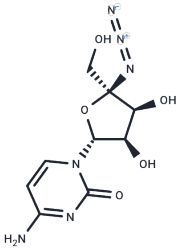
Data Sheet (Cat.No.TQ0162)

TargetMol

R-1479

Chemical Properties



CAS No. : 478182-28-4

Formula: C9H12N6O5

Molecular Weight: 284.23

Storage: Store at low temperature
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	R-1479 (4'-Azidocytidine) is an RdRp inhibitor with an IC50 value of 1.28 μM for HCV RNA replication in the HCV subgenomic replicon system.
Targets(IC50)	HCV Protease,DNA/RNA Synthesis
In vitro	R-1479 inhibits HCV RNA replication and reduces Renillaluciferase activity of proliferating replicon cells in a dose-dependent manner[1]. R-1479 inhibits RNA synthesis mediated by NS5B with an IC50 value of 320 nM and the RNA polymerase encoded by HCV[2].
Kinase Assay	The membrane-associated, native HCV replicase complex is isolated from 2209-23 HCV replicon cells and a derived cell line carrying HCV replicon RNA with an S282T mutation in the NS5B coding sequence. The in vitro replicase assay contain 10 μL of cytoplasmic membrane fraction, 50 mM HEPES (pH 7.5), 10 mM KCl, 10 mM dithiothreitol, 5 mM MgCl2, 20 μg/mL actinomycin D, 1 mM ATP, 1 mM GTP, 1 mM UTP, 30 μCi of [α-33P]CTP (3000 Ci/mmol, 10 mCi/mL), 1 unit/μL SUPERase•In, 10 mM creatine phosphate, and 200 μg/mL creatine phosphokinase in a final volume of 25 μL [1].

Solubility Information

Solubility	DMSO: 90 mg/mL (316.64 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: 3.3 mg/mL (11.61 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	3.5183 mL	17.5914 mL	35.1828 mL
5 mM	0.7037 mL	3.5183 mL	7.0366 mL
10 mM	0.3518 mL	1.7591 mL	3.5183 mL
50 mM	0.0704 mL	0.3518 mL	0.7037 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

Klumpp K, et al. The novel nucleoside analog R1479 (4'-azidocytidine) is a potent inhibitor of NS5B-dependent RNA synthesis and hepatitis C virus replication in cell culture. J Biol Chem. 2006 Feb 17;281(7):3793-9.
Smith DB, et al. Design, synthesis, and antiviral properties of 4'-substituted ribonucleosides as inhibitors of hepatitis C virus replication: the discovery of R1479. Bioorg Med Chem Lett. 2007 May 1;17(9):2570-6.
Nguyen NM, et al. A randomized, double-blind placebo controlled trial of balapiravir, a polymerase inhibitor, in adult dengue patients. J Infect Dis. 2013 May 1;207(9):1442-1450.