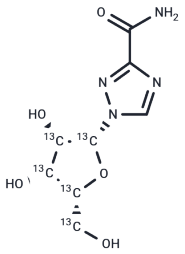
Data Sheet (Cat.No.T38297)

TargetMol

Ribavirin-13C5

Chemical Properties



CAS No. :	1646818-35-0
Formula:	C8H12N4O5
Molecular Weight:	249.17
Storage:	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	Ribavirin-13C5 is intended for use as an internal standard for the quantification of ribavirin by GC- or LC-MS. Ribavirin (T0684) is an antiviral guanosine nucleoside analog. 1,2Upon entry into cells, ribavirin is metabolized to an active triphosphate form that induces viral RNA chain termination and inhibits viral polymerases. It reduces replication in a panel of seven RNA and four DNA viruses in Vero cells (EC50s = 2-95 μg/ml). 3Ribavirin also reduces replication of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) in Vero cells (EC50= 109.5 μM).4Aerosol administration of ribavirin (30 mg/kg) reduces mortality in a mouse model of influenza A infection.5Formulations containing ribavirin have been used in the treatment of respiratory syncytial virus (RSV), hepatitis C virus (HCV), and viral hemorrhagic fevers.
Targets(IC50)	HCV Protease,Antibiotic,RSV

Solubility Information

Solubility	DMSO: Slightly soluble H2O: Slightly soluble (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.0133 mL	20.0666 mL	40.1332 mL
5 mM	0.8027 mL	4.0133 mL	8.0266 mL
10 mM	0.4013 mL	2.0067 mL	4.0133 mL
50 mM	0.0803 mL	0.4013 mL	0.8027 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

Gilbert, B.E., and Knight, V.Biochemistry and clinical applications of ribavirinAntimicrob. Agents Chemother.30(2) 201-205(1986)

Gordon, C.J., Tchesnokov, E.P., Woolner, E., et al.Remdesivir is a direct-acting antiviral that inhibits RNA-dependent RNA polymerase from severe acute respiratory syndrome coronavirus 2 with high potencyJ. Biol. Chem.295(20) 6785-6797(2020)

Kirsi, J.J., North, J.A., McKernan, P.A., et al.Broad-spectrum antiviral activity of 2-β-D-ribofuranosylselenazole-4-carboxamide, a new antiviral agentAntimicrob. Agents Chemother.24(3)353-361(1983)

Wang, M., Cao, R., Zhang, L., et al.Remdesivir and chloroquine effectively inhibit the recently emerged novel coronavirus (2019-nCoV) in vitroCell Res.30(3)269-271(2020)

Wilson, S.Z., Knight, V., Wyde, P.R., et al.Amantadine and ribavirin aerosol treatment of influenza A and B infection in miceAntimicrob. Agents Chemother.17(4)642-648(1980)