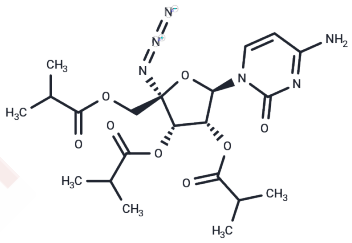
Data Sheet (Cat.No.T14493)

TargetMol

Balapiravir

Chemical Properties



CAS No. : 690270-29-2

Formula: C21H30N6O8

Molecular Weight: 494.5

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	Balapiravir (R1626, Ro 4588161) is the prodrug of a nucleoside analogue inhibitor of the hepatitis C virus (HCV) RNA-dependent RNA polymerase (R1479, RG1479). IC50 Value: Target: HCV Balapiravir was discontinued for safety reasons in 28-36% of patients (most often for lymphopenia) and the percentage of patients with serious adverse events (especially hematological, infection, ocular events) was dose related. Balapiravir (R1626) is the tri-isobutyrate ester prodrug of R1479 under clinical development to improve exposure of R1479 upon oral administration. Balapiravir(R-1626; R 1626; Ro 4588161) is useful for Anti HCV. Serious hematological adverse events (particularly neutropenia, lymphopenia) were more common in balapiravir recipients. Two deaths in the balapiravir/peginterferon alfa-2a/ribavirin combination groups were considered possibly related to study medication.
Targets(IC50)	Others,HCV Protease,DNA/RNA Synthesis

Solubility Information

Solubility	DMSO: 100 mg/mL (202.22 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 (6.67 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	2.0222 mL	10.1112 mL	20.2224 mL
5 mM	0.4044 mL	2.0222 mL	4.0445 mL
10 mM	0.2022 mL	1.0111 mL	2.0222 mL
50 mM	0.0404 mL	0.2022 mL	0.4044 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

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.
Nelson DR, et al. Balapiravir plus peginterferon alfa-2a (40KD)/ribavirin in a randomized trial of hepatitis C genotype 1 patients.Ann Hepatol. 2012 Jan-Feb;11(1):15-31.
Li F, et al. Chemical stability of 4'-azidocytidine and its prodrug balapiravir.Drug Dev Ind Pharm. 2010 Apr;36(4):413-20.
kros PJ, et al. R1626 plus peginterferon Alfa-2a provides potent suppression of hepatitis C virus RNA and significant antiviral synergy in combination with ribavirin.Hepatology. 2008 Aug;48(2):385-97.
Roberts SK, et al. Robust antiviral activity of R1626, a novel nucleoside analog: a randomized, placebo-controlled study in patients with chronic hepatitis C.Hepatology. 2008 Aug;48(2):398-406.
Chen YL, et al. Activation of peripheral blood mononuclear cells by dengue virus infection depotentiates balapiravir. J Virol. 2014 Feb;88(3):1740-1747.