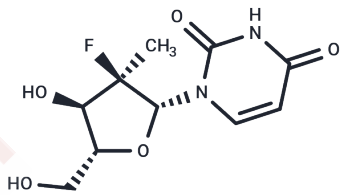
Data Sheet (Cat.No.T2117)

TargetMol

PSI-6206

Chemical Properties



CAS No. : 863329-66-2

Formula: C10H13FN2O5

Molecular Weight: 260.22

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	PSI-6206 (RO 2433) (RO2433) is a selective HCV RNA polymerase inhibitor.
Targets(IC50)	HCV Protease
In vitro	PSI-6206 (RO2433), a deaminated derivative of PSI-6130, a potent and selective inhibitor of HCV NS5B polymerase, has been evaluated for its anti-HCV efficacy employing both a cell-based quantitative real-time RT-PCR assay and surrogate bovine viral diarrhea virus (BVDV) assays. It showed no activity or cytotoxicity in these assays. The formation of 5′-triphosphate (TP) forms of PSI-6130 (PSI-6130-TP) and RO2433 (RO2433-TP) progressively increased, achieving steady state levels after 48 hours. Notably, RO2433-TP effectively inhibits RNA synthesis by both the native HCV replicase from HCV replicon cells and the recombinant HCV polymerase NS5B, highlighting its potential mechanism of action against HCV replication.
Kinase Assay	Protein Kinase Assays: The in vitro kinase assays are performed in 96-well plates (30 μL) at ambient temperature for 15–45 min using the recombinant glutathione S-transferase-fused kinase domains (4-100 ng, depending on specific activity). [γ33P]ATP is used as phosphate donor and polyGluTyr-(4:1) peptide as acceptor. With the exception of protein kinase C-α, cyclin-dependent kinase 1/cycB and protein kinase A are protamine sulfate (200 μg/mL), histone H1 (100 μg/mL), and the heptapeptide Leu-Arg-Arg-Ala-Ser-Leu-Gly (known as Kemptide Bachem) respectively and are used as peptide substrates. Assays are optimized for each kinase using the following ATP concentrations: 1.0 μM (c-Kit, c-Met, c-Fms, c-Raf-1, and RET), 2.0 μM (EGFR, erbB2, ErbB3, and ErbB4), 5.0 μM (c-abl), 8.0 μM (Flt-1, Flt-3, Flt-4, Flk, KDR, FGFR-1, and Tek), 10.0 μM (PDGFR-β, protein kinase C-α, and cyclin-dependent kinase 1), and 20.0 μM (c-Src and protein kinase A). The reaction is terminated by the addition of 20 μL 125 mM EDTA. Thirty μL (c-abl, c-Src, insulin-like growth factor-1R, RET-Men2A, and RET-Men2B) or 40 μL (all other kinases) of the reaction mixture is transferred onto Immobilon-polyvinylidene difluoride membrane, presoaked with 0.5% H3PO4 and mounted on a vacuum manifold. Vacuum is then applied and each well rinsed with 200 μL 0.5% H3PO4. Membranes are removed and washed four times with 1.0% H3PO4 and once with ethanol. Dried membranes are counted after mounting in a Packard TopCount 96-well frame and with the addition of 10 μL/well of Microscint. IC50 values (±SE) are calculated by linear regression analysis of the percentage inhibition and are averages of at least three determinations.

Solubility Information

Solubility	DMSO: 60 mg/mL (230.57 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: 2 mg/mL (7.69 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	3.8429 mL	19.2145 mL	38.429 mL
5 mM	0.7686 mL	3.8429 mL	7.6858 mL
10 mM	0.3843 mL	1.9215 mL	3.8429 mL
50 mM	0.0769 mL	0.3843 mL	0.7686 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

Clark JL, et al. Design, Synthesis, and Antiviral Activity of 2'-Deoxy-2'-fluoro-2'-C-methyl-cytidine, a Potent Inhibitor of Hepatitis C Virus Replication. J Med Chem. 2005 Aug 25;48(17):5504-8.

Ma H, et al. Characterization of the metabolic activation of hepatitis C virus nucleoside inhibitor beta-D-2'-Deoxy-2'-fluoro-2'-C-methylcytidine (PSI-6130) and identification of a novel active 5'-triphosphate species. J Biol Chem. 2007 Oct 12;282(41):29

Wang P, et al. An efficient and diastereoselective synthesis of PSI-6130: a clinically efficacious inhibitor of HCV NS5B polymerase. J Org Chem. 2009 Sep 4;74(17):6819-24.