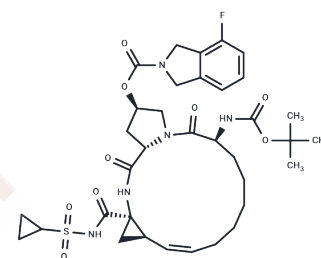


Danoprevir

Chemical Properties

CAS No. :	850876-88-9
Formula:	C35H46FN5O9S
Molecular Weight:	731.83
Storage:	Store at low temperature Powder: -20°C for 3 years In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small>



Biological Description

Description	Danoprevir (RG7227) is a peptidomimetic inhibitor of the NS3/4A protease (IC ₅₀ =0.2-3.5 nM) of hepatitis C virus (HCV).
Targets(IC ₅₀)	HCV Protease, SARS-CoV
In vivo	In rats or monkeys, Danoprevir (30 mg/kg) was administered.
Kinase Assay	Continuous fluorescent resonance energy transfer (FRET) assay: The assay buffer contains 25 μM NS4A peptide, 50 mM Tris-HCl, pH 7.5, 15% (vol/vol) glycerol, 0.6 mM lauryldimethylamine N-oxide, 10 mM dithiothreitol, and 0.5 μM fluorescein/QXL520-labeled FRET substrate {Ac-DE-Dap(QXL520)-EE-Abu-ψ-[COO]-AS-Cys(5-FAMsp)-NH ₂ }. K2040 enzyme (50 pM) is added to initiate the reaction. Reactions are set up in black 96-well plates, and fluorescence data is collected. Control reactions lacking inhibitors and enzyme are included. Initial rates are calculated from the linear phase of the reaction (up to 1 hour) and are used to obtain IC ₅₀ . Recovery of activity from preformed Danoprevir-NS3/4A complex is assessed by preincubating 10 nM NS3/4A with a two-fold excess of Danoprevir in 1× assay buffer for 15 min, followed by a rapid 200-fold dilution of the preformed complex into assay buffer containing substrate. A control reaction with the same final conditions without preincubation of NS3/4A and Danoprevir is initiated by the addition of enzyme to an otherwise-complete reaction mixture. Additional control reactions lack either Danoprevir or NS3. The progress of the reactions is followed over 5 hours.
Cell Research	Serially diluted Danoprevir is added to Huh7 cells harboring the K2040 replicon 1 day after cell plating. For antiviral assays, after a 48-hour incubation, intracellular RNA is extracted, and the level of HCV replicon RNA is quantified by reverse transcription (RT)-PCR assay with the primers (5'-CACTCCCCTGTGAGGA ACTACTG-3' and 5'-AGGCTGCACGACACTCATACT-3') and a probe (5'-6-FAM-CTTCACGCAGAAAGCGTCTAGCCATGG-MGBNFQ-3' using an ABI Prism 7900 sequence detection system. Here, FAM is 6-carboxyfluorescein and MGBNFQ is a molecular-groove binding non-fluorescence quencher specific to the HCV 5' untranslated region. Single-tube reactions are performed using the TaqMan Gold RT-PCR kit. Triplicate reactions for the RNA standards and samples are performed in 50 μL with 5 μL intracellular RNA (50 ng). RT is carried out at 48 °C for 30 min followed by 10 min at 95 °C. The PCR is run as

A DRUG SCREENING EXPERT

Cell Research	follows: 15 seconds at 95 °C and 1 min at 60 °C for 40 cycles. Each RNA concentration is determined in triplicate. The absolute concentration of replicon RNA is calculated based on its signal relative to that of a standard curve generated by known concentrations of an in vitro-transcribed RNA corresponding to a genotype 1b 5' untranslated region. Replicon levels in the presence of Danoprevir are fitted to a four-parameter logistic function to obtain EC50.(Only for Reference)
---------------	---

Solubility Information

Solubility	H2O: < 1 mg/mL (insoluble or slightly soluble), DMSO: 150 mg/mL (204.97 mM),Sonication is recommended. Ethanol: 133 mg/mL (181.74 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: 10 mg/mL (13.66 mM),Suspension. 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 4 mg/mL (5.47 mM),Sonication is recommended. <i>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.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.3664 mL	6.8322 mL	13.6644 mL
5 mM	0.2733 mL	1.3664 mL	2.7329 mL
10 mM	0.1366 mL	0.6832 mL	1.3664 mL
50 mM	0.0273 mL	0.1366 mL	0.2733 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

- Seiwert SD, et al. Antimicrob Agents Chemother, 2008, 52(12), 4432-4441.
Bartels DJ, et al. J Infect Dis, 2008, 198(6), 800-807.
Imhof I, et al. Hepatology, 2011, 53(4), 1090-1099.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only· Not for Human or Veterinary or Therapeutic Use

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481