Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

Danoprevir

Catalog No: tcsc0337

Available Sizes

Size: 2mg

Size: 5mg

Size: 10mg

Size: 50mg

Specifications

CAS No:
850876-88-9

Formula:
$C_{35}H_{46}FN_5O_9S$

Pathway:
Metabolic Enzyme/Protease;Anti-infection

Target:
HCV Protease;HCV

Purity / Grade:
>98%

Solubility:
10 mM in DMSO

Alternative Names:
ITMN-191;R7227;RO5190591;RG7227

Observed Molecular Weight:
731.83

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Product Description

Danoprevir is a peptidomimetic inhibitor of the **NS3/4A protease** of **hepatitis C virus (HCV)** with **IC_{50}** of 0.2-3.5 nM. The inhibition effect on HCV genotypes 1A/1B/4/5/6 is appr 10-fold higher than 2B/3A.

IC50 & Target: IC50: 0.2-3.5 nM (NS3/4A protease)

In Vitro: In Huh7.5 cells transfected with chimeric recombinant virus, Danoprevir shows antiviral inhibition effects against HCV genotypes 1, 4 and 6 with IC_{50} of 2-3 nM, which are >100-fold lower than genotypes 2/3/5 (280-750 nM)[1]. Danoprevir (0.29 nM) inhibits the reference genotype 1 NS3/4A protease half-maximally, but a high dose of Danoprevir (10 μM) shows no appreciably inhibition in a panel of 79 proteases, ion channels, transporters, and cell surface receptors. Danoprevir remains bound to and inhibits NS3/4A for more than 5 hours after its initial association. Danoprevir (45 nM) eliminates a patient-derived HCV genotype 1b replicon from hepatocyte-derived Huh7 cells with an EC_{50} of 1.8 nM[2]. In HCV subgenomic replicon cell lines containing the individual mutations, V36M, R109K, and V170A substitutions confer little or no resistance to Danoprevir, but the R155K substitution confers a high level (62-fold increase) of resistance to Danoprevir[3].

In Vivo: Danoprevir (30 mg/kg, p.o.) administered to rats or monkeys shows that its concentrations in liver 12 hours after dosing exceed the Danoprevir concentration required to eliminate replicon RNA from cells[2].