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

Tipranavir

Catalog No: tcsc1210

Available Sizes

Size: 1mg

Size: 5mg

Size: 10mg

Specifications

CAS No:
174484-41-4

Formula:
$C_{31}H_{33}F_3N_2O_5S$

Pathway:
Metabolic Enzyme/Protease;Anti-infection

Target:
HIV Protease;HIV

Purity / Grade:
>98%

Solubility:
Ethanol : ≥ 50 mg/mL (82.97 mM)

Alternative Names:
PNU-140690

Observed Molecular Weight:
602.66

Product Description

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Tipranavir (PNU-140690) inhibits the enzymatic activity and dimerization of **HIV-1 protease**, exerts potent activity against multi-protease inhibitor (PI)-resistant HIV-1 isolates with **IC_{50}**s of 66-410 nM.

IC50 & Target: IC50: 66-410 nM (HIV-1 isolates)[1]

In Vitro: Tipranavir (PNU-140690) inhibits the enzymatic activity of HIV-1 protease, blocks the dimerization of protease subunits, and exerts potent activity against a wide spectrum of wild-type and multi-PI-resistant HIV-1 variants. When a mixture of 11 multi-PI-resistant (but TPV-sensitive) clinical isolates (HIV_{11MIX}), which include HIV_B and HIV_C, is selected against Tipranavir, HIV_{11MIX} rapidly (by 10 passages [HIV_{11MIX}^{P10}]) acquires high-level Tipranavir (PNU-140690) resistance and replicates at high concentrations of Tipranavir (PNU-140690). $cHIV_B^{I54V}$ and $cHIV_B^{I54V/V82T}$ are significantly resistant to Tipranavir (PNU-140690), with IC_{50}s of 2.9 and 3.2 μM, respectively, which are 11- and 12-fold increases in comparison to the IC_{50} against $cHIV_B$, respectively[1].

In Vivo: Tipranavir (PNU-140690) is administered orally twice daily and must be given in combination with low-dose ritonavir (RTV) to boost Tipranavir bioavailability. In Tipranavir/r-cotreated mice, the Tipranavir (PNU-140690) abundance in the liver, spleen, and eyes is significantly higher than that in mice treated with Tipranavir alone. Tipranavir (PNU-140690) metabolites accounts for 31 and 38% in the serum and liver in the Tipranavir-alone group. In Tipranavir (PNU-140690) and Tipranavir (TPV/r)-cotreated mice, only 1 and 2% of metabolites are detected in the serum and liver. Sprague-Dawley rats are administered a single dose of [^{14}C]Tipranavir (PNU-140690) with coadministration of RTV. The most abundant metabolite in feces is an oxidation metabolite. In urine, no single metabolite is found to be significantly present[2].