

Product Data Sheet

Product Name: PSI-6130

Cat. No.: GC37028

Chemical Properties

Cas. No. 817204-33-4

SMILES O=C1N=C(C=CN1[C@@H]([C@@](C)([C@@H]2O)F)O[C@@H]2CO)N

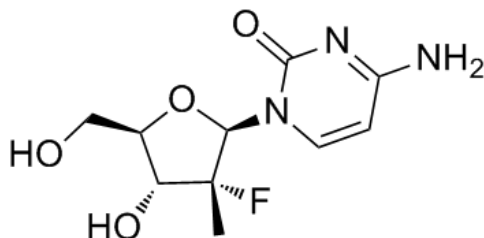
Formula $C_{10}H_{14}FN_3O_4$ M.Wt 259.23

Solubility DMSO: ≥ 50 mg/mL (192.88 mM) Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37°C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure



Protocol

Caution: Product has not been fully validated for medical applications. For research use only.

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**Kinase
experiment:**

The inhibition potency of compounds with respect to the RdRp activity of recombinant NS5B570-BK, NS5B570-Con1, and NS5B570-H77 proteins is determined by measuring the incorporation of radiolabeled NMP into acid-insoluble RNA products by use of a complement strand of internal ribosomal entry site (cIRES) RNA template. Briefly, 50% inhibitory concentration (IC₅₀) determinations are carried out using 200 nM in vitro-transcribed cIRES RNA template, 1 µCi of tritiated UTP (42 Ci/mmol), 500 µM ATP, 500 µM GTP, 1 µM CTP, 1× TMDN buffer (40 mM Tris-HCl [pH 8.0], 4 mM MgCl₂, 4 mM dithiothreitol, 40 mM NaCl), and 200 nM enzyme. The inhibition potency of compounds with respect to the RdRp activity of NS5B570-S282T-Con1 is determined under GT-1b assay conditions as. NS5B570-BK and NS5B570-Con1 enzymes are used as controls. The final reaction volume is 50 µL under all assay conditions. All reactions contain a final 10% dimethyl sulfoxide. K_m and K_i values are measured.

References:

- [1]. Ali S, et al. Selected replicon variants with low-level in vitro resistance to the hepatitis C virus NS5B polymerase inhibitor PSI-6130 lack cross-resistance with R1479. *Antimicrob Agents Chemother.* 2008 Dec;52(12):4356-69.
- [2]. 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):29812-20. Epub 2007 Aug 13.

Background

PSI-6130 is a potent and selective inhibitor of HCV NS5B polymerase, and inhibits HCV replication with a mean IC₅₀ of 0.6 µM. IC₅₀: 0.6 µM (HCV replication)[2]

PSI-6130 exhibits potent and specific inhibitory activity against HCV RNA replication mediated by the NS5B polymerase. Both PSI-6130 inhibit HCV GT-1b (Con1 strain) and GT-1a (H77 strain) subgenomic RNA replication, with mean EC₅₀ values of 0.51 and 0.30 µM, respectively. PSI-6130 inhibits 40% human serum with EC₅₀ of 0.51 µM[1]. PSI-6130 inhibits HCV replication with a mean

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IC₅₀ of 0.6 μ M, PSI-6130-TP inhibits HCV replicase with a mean IC₅₀ of 0.34 μ M. PSI-6130-TP inhibits recombinant HCV Con1 NS5B on a heteropolymeric RNA template derived from the 3'-end of the negative strand of the HCV genome with an IC₅₀ of 0.13 μ M and K_i of 0.023 μ M[2].

[1]. Ali S, et al. Selected replicon variants with low-level in vitro resistance to the hepatitis C virus NS5B polymerase inhibitor PSI-6130 lack cross-resistance with R1479. *Antimicrob Agents Chemother.* 2008 Dec;52(12):4356-69. [2]. 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):29812-20. Epub 2007 Aug 13.

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