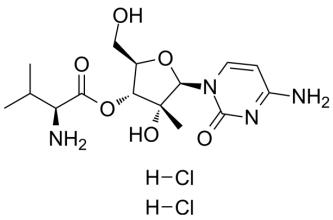
Valopicitabine dihydrochloride

Cat. No.:	HY-108060A
CAS No.:	640725-71-9
Molecular Formula:	$C_{15}H_{26}Cl_2N_4O_6$
Molecular Weight:	429.3
Target:	HCV; HCV Protease; Nucleoside Antimetabolite/Analog
Pathway:	Anti-infection; Metabolic Enzyme/Protease; Cell Cycle/DNA Damage
Storage:	-20°C, protect from light, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light, stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (232.94 mM; Need ultrasonic)
H_2O : 100 mg/mL (232.94 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.3294 mL	11.6469 mL	23.2937 mL
	5 mM	0.4659 mL	2.3294 mL	4.6587 mL
	10 mM	0.2329 mL	1.1647 mL	2.3294 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (5.82 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (5.82 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (5.82 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Valopicitabine (NM283) dihydrochloride is a nucleoside analog and the orally bioavailable proagent of the potent anti-HCV agent 2'-C-methylcytidine (NM107). NM107competitively inhibits NS5B polymerase, causing chain termination[1][2].

In Vivo

Valopicitabine (NM283) (100 mg/kg; oral administration; Sprague-Dawley Rats) dihydrochloride shows the C_{max}, AUC, $t_{1/2}$, and t_{max} were 3.624 μg/mL, 8.95 μg h/mL, 0.64 hours and 1 hour, respectively[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Liu-Young G, et al. Hepatitis C protease and polymerase inhibitors in development. AIDS Patient Care STDS. 2008;22(6):449-457.

[2]. Pierra C, et al. Synthesis and pharmacokinetics of valopicitabine (NM283), an efficient prodrug of the potent anti-HCV agent 2'-C-methylcytidine. J Med Chem. 2006;49(22):6614-6620.

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

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