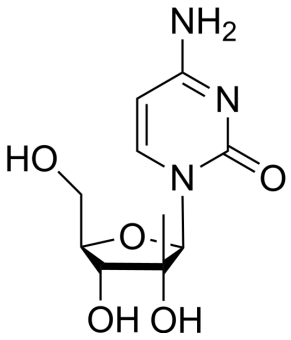
NM107

Cat. No.:	HY-10468
CAS No.:	20724-73-6
Molecular Formula:	$C_{10}H_{15}N_3O_5$
Molecular Weight:	257.24
Target:	HCV
Pathway:	Anti-infection
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (388.74 mM; Need ultrasonic)

H_2O : ≥ 50 mg/mL (194.37 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Concentration / Solvent / Mass	1 mg	5 mg	10 mg
	1 mM	3.8874 mL	19.4371 mL	38.8742 mL
	5 mM	0.7775 mL	3.8874 mL	7.7748 mL
	10 mM	0.3887 mL	1.9437 mL	3.8874 mL

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

In Vivo

1. Add each solvent one by one: PBS
   Solubility: 50 mg/mL (194.37 mM); Clear solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (9.72 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (9.72 mM); Clear solution
4. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (9.72 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

NM107 (2'-C-Methylcytidine) is an nucleoside inhibitor of the hepatitis C virus (HCV) NS5B polymerase, the EC_{50} of NM107 in the wild-type replicon cells is 1.85 μM[1][2].

IC_{50} & Target	HCV[1]
In Vitro	NM107 (25 μM; 24 hours; Huh7-1 cells and cell culture-propagated HCV) treatment decreases extracellular viral titers and intracellular RNA levels. MCE has not independently confirmed the accuracy of these methods. They are for reference only. RT-PCR[2]

Cell Line:	Huh7-1 cells and cell culture-propagated HCV (HCVcc)
Concentration:	25 μM
Incubation Time:	24 hours
Result:	Extracellular virus titers declined in parallel with intracellular RNA levels.

REFERENCES

[1]. Mathy JE, et al, Combinations of cyclophilin inhibitor NIM811 with hepatitis C Virus NS3-4A Protease or NS5B polymerase inhibitors enhance antiviral activity and suppress the emergence of resistance. Antimicrob Agents Chemother. 2008 Sep;52(9):3267-75.

[2]. Guedj J, et al. Modeling shows that the NS5A inhibitor daclatasvir has two modes of action and yields a shorter estimate of the hepatitis C virus half-life. Proc Natl Acad Sci U S A. 2013 Mar 5;110(10):3991-6.

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