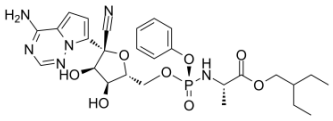
Remdesivir

Cat. No.:	HY-104077
CAS No.:	1809249-37-3
Molecular Formula:	$C_{27}H_{35}N_6O_8P$
Molecular Weight:	602.58
Target:	DNA/RNA Synthesis; SARS-CoV
Pathway:	Cell Cycle/DNA Damage; Anti-infection
Storage:	Powder -20°C 3 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 100 mg/mL (165.95 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	1.6595 mL	8.2977 mL	16.5953 mL
	5 mM	0.3319 mL	1.6595 mL	3.3191 mL
	10 mM	0.1660 mL	0.8298 mL	1.6595 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: ≥ 2.17 mg/mL (3.60 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 5 mg/mL (8.30 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.17 mg/mL (3.60 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Remdesivir (GS-5734), a nucleoside analogue with effective antiviral activity, has EC_{50}s of 74 nM for SARS-CoV and MERS-CoV in HAE cells, and 30 nM for murine hepatitis virus in delayed brain tumor cells. Remdesivir is highly effective in the control of SARS-CoV-2 (COVID-19) infection in vitro[1][2].

IC_{50} & Target

EC50: 30 nM (murine hepatitis virus, delayed brain tumor cell), 74 nM (SARS-CoV, HAE cell), 74 nM (MERS-CoV, HAE cell)[1]

In Vitro

Remdesivir (GS-5734) is a potent antiviral agent. Remdesivir inhibits murine hepatitis virus (MHV) with an EC_{50} of 30 nM, and

blocks SARS-CoV and MERS-CoV in HAE cells with EC_{50}s of both 74 nM in HAE cells after treatment for 24 h[1].

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

CUSTOMER VALIDATION

- Nature. 2020 Jun;582(7813):561-565.
- Science. 2020 Jun 26;368(6498):1499-1504.
- Cell Res. 2020 Mar;30(3):269-271.
- Nucleic Acids Res. 2020 Nov 9;gkaa969.
- Sci Bull. 2020 Dec 9.

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REFERENCES

[1]. Agostini ML, et al. Coronavirus Susceptibility to the Antiviral Remdesivir (GS-5734) Is Mediated by the Viral Polymerase and the Proofreading Exoribonuclease. MBio. 2018 Mar 6;9(2). pii: e00221-18.

[2]. Wang M, et al. Remdesivir and chloroquine effectively inhibit the recently emerged novel coronavirus (2019-nCoV) in vitro. Cell Res. 2020 Mar;30(3):269-271.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA