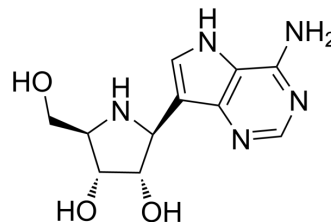


Galidesivir

Cat. No.:	HY-18649A		
CAS No.:	249503-25-1		
Molecular Formula:	C ₁₁ H ₁₅ N ₅ O ₃		
Molecular Weight:	265.27		
Target:	Filovirus; DNA/RNA Synthesis; SARS-CoV		
Pathway:	Anti-infection; Cell Cycle/DNA Damage		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

H₂O : 100 mg/mL (376.97 mM; Need ultrasonic)

Concentration	Solvent	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	3.7697 mL	18.8487 mL	37.6974 mL
	5 mM	0.7539 mL	3.7697 mL	7.5395 mL
	10 mM	0.3770 mL	1.8849 mL	3.7697 mL

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

BIOLOGICAL ACTIVITY

Description

Galidesivir (BCX4430), an adenosine analog and a direct-acting antiviral agent, disrupts viral RNA-dependent RNA polymerase (RdRp) activity. Galidesivir is active in vitro against many RNA viral pathogens, including the filoviruses and emerging infectious agents such as MERS-CoV, SARS-CoV, and SARS-CoV-2. Galidesivir inhibits some negative-sense RNA viruses with EC₅₀s ranging from ~3 to ~68 μM^{[1][2][3]}.

IC₅₀ & Target

RdRp

In Vitro

Cellular kinases phosphorylate Galidesivir (BCX4430) to a triphosphate that mimics ATP; viral RNA polymerases incorporate the drug's monophosphate nucleotide into the growing RNA chain, causing premature chain termination^[1]. Galidesivir effectively inhibits the infection of Vero cells with YFV. The EC₅₀ determined by the neutral red uptake assay is 8.3 μg/ml (24.5 μM)^[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Galidesivir (BCX4430) is active after intramuscular, intraperitoneal, and oral administration in a variety of experimental infections. In nonclinical studies involving lethal infections with Ebola virus, Marburg virus, Rift Valley fever virus, and Yellow

Fever virus, Galidesivir has demonstrated pronounced efficacy^[1].
Galidesivir (4 mg/kg; i.p.; twice daily for 7 days) is effectively in a hamster model of yellow fever (YF)^[4].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Female Syrian golden hamsters (hamsters infected with YF virus) ^[4]
Dosage:	4 mg/kg of body weight
Administration:	I.p.; twice daily for 7 days
Result:	Significantly improved the survival of hamsters infected with YFV.

CUSTOMER VALIDATION

- Nucleic Acids Res. 2021 Jan 8;49(D1):D1113-D1121.
- Antiviral Res. 2017 Mar 21;142:63-67.
- Antimicrob Agents Chemother. 2019 Feb 26;63(3):e02093-18.
- Viruses. 2020 Jun 10;12(6):628.
- Microorganisms. 2021 Mar 31;9(4):734.

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REFERENCES

- [1]. Elfiky AA, et al. ICN-1229, Remdesivir, PSI-7977, Galidesivir, and GS 1278 against SARS-CoV-2 RNA dependent RNA polymerase (RdRp): A molecular docking study. Life Sci. 2020 Mar 25:117592.
- [2]. Taylor R, et al. BCX4430 - A broad-spectrum antiviral adenosine nucleoside analog under development for the treatment of Ebola virus disease. J Infect Public Health. 2016;9(3):220-226.
- [3]. Warren TK, et al. Protection against filovirus diseases by a novel broad-spectrum nucleoside analogue BCX4430. Nature. 2014;508(7496):402-405.
- [4]. Julander JG, et al. BCX4430, a novel nucleoside analog, effectively treats yellow fever in a Hamster model. Antimicrob Agents Chemother. 2014;58(11):6607-6614.

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

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