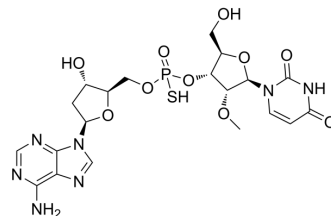


Inarigivir

Cat. No.:	HY-101954		
CAS No.:	475650-36-3		
Molecular Formula:	C ₂₀ H ₂₆ N ₇ O ₁₀ PS		
Molecular Weight:	587.5		
Target:	HBV		
Pathway:	Anti-infection		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 200 mg/mL (340.43 mM; Need ultrasonic)

Concentration	Solvent	Mass	1 mg	5 mg	10 mg
			1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM		1.7021 mL	8.5106 mL	17.0213 mL
	5 mM		0.3404 mL	1.7021 mL	3.4043 mL
	10 mM		0.1702 mL	0.8511 mL	1.7021 mL

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

In Vivo

- Add each solvent one by one: 5% DMSO >> 40% PEG300 >> 5% Tween-80 >> 50% saline
Solubility: ≥ 2.5 mg/mL (4.26 mM); Clear solution
- Add each solvent one by one: 5% DMSO >> 95% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (4.26 mM); Clear solution
- Add each solvent one by one: 1% DMSO >> 99% saline
Solubility: ≥ 0.25 mg/mL (0.43 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Inarigivir (ORI-9020) is a dinucleotide antiviral drug that can significantly reduce liver HBV DNA in transgenic mice expressing hepatitis B virus. Inarigivir (ORI-9020) act as a RIG-I agonist to activate cellular innate immune responses^{[1][2]}.

IC₅₀ & Target

Target: HBV^[1]

In Vitro

Inarigivir (SB 9200) is active against HBV variants carrying resistance markers against all the nucleos(t)ide analogues approved for treating chronic hepatitis B^[2].

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

In Vivo

Inarigivir (100 mg/kg/day, ip) significantly reduces viral DNA in the liver and shows anti-HBV activity. Serum HBV DNA is not reduced in response to treatment. Inarigivir does not affect levels of HBV RNA in liver, levels of HBeAg in serum, or mean titers of HBsAg. The minimal effective dose is identified to be between 1.6 and 0.5 mg/kg/day using liver HBV DNA values^[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Mice ^[1]
Dosage:	100 mg/kg.
Administration:	IP, daily.
Result:	Significantly reduced viral DNA in the liver and shows anti-HBV activity similar ADV positive control.

REFERENCES

[1]. Iyer RP, et al. Anti-hepatitis B virus activity of ORI-9020, a novel phosphorothioate dinucleotide, in a transgenic mouse model. *Antimicrob Agents Chemother.* 2004 Jun;48(6):2318-20.

[2]. Danni Colledge, et al. The Novel Antiviral Agent Inarigivir Inhibits Both Nucleos(t)ide Analogue and Capsid Assembly Inhibitor Resistant HBV in vitro.

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

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