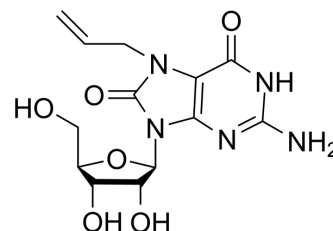


Loxoribine

Cat. No.:	HY-108472		
CAS No.:	121288-39-9		
Molecular Formula:	C ₁₃ H ₁₇ N ₅ O ₆		
Molecular Weight:	339.3		
Target:	Toll-like Receptor (TLR); Influenza Virus		
Pathway:	Immunology/Inflammation; 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 : 100 mg/mL (294.72 mM; Need ultrasonic)

Concentration	Solvent	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	2.9472 mL	14.7362 mL	29.4724 mL
	5 mM	0.5894 mL	2.9472 mL	5.8945 mL
	10 mM	0.2947 mL	1.4736 mL	2.9472 mL

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

In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.5 mg/mL (7.37 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (7.37 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (7.37 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Loxoribine (7-Allyl-8-oxoguanosine) is a guanosine analog with anti-viral and anti-tumor activities. Loxoribine is an orally bioavailable and selective Toll-like receptor (TLR) 7 agonist^{[1][2][3]}.

IC₅₀ & Target

TLR7

In Vitro

Loxoribine induces maturation of human monocyte-derived dendritic cells DCs and stimulates their Th-1- and Th-17-polarizing capability^[2].

Loxoribine (250 μ M; 48 hours) stimulates maturation of MoDCs as shown by up-regulation of CD80, CD83, CD40, CD54 and CCR7^[2].

loxoribine activates cells of the innate immune system selectively via the Toll-like receptor (TLR) 7/MyD88-dependent signaling pathway^[1].

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

In Vivo

Loxoribine (2 mg; s.c.or i.v.) activates murine natural killer (NK) cells in vivo^[3].

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

Animal Model:	8-12 weeks male CBA/J mice ^[3]
Dosage:	2 mg
Administration:	Subcutaneous or intravenous injection
Result:	activates murine natural killer (NK) cells in vivo.

REFERENCES

[1]. Heil F, et al. The Toll-like receptor 7 (TLR7)-specific stimulus loxoribine uncovers a strong relationship within the TLR7, 8 and 9 subfamily. *Eur J Immunol.* 2003 Nov;33(11):2987-97.

[2]. Dzopalic T, et al. Loxoribine, a selective Toll-like receptor 7 agonist, induces maturation of human monocyte-derived dendritic cells and stimulates their Th-1- and Th-17-polarizing capability. *Int Immunopharmacol.* 2010 Nov;10(11):1428-33.

[3]. Pope BL, et al. In vivo enhancement of murine natural killer cell activity by 7-allyl-8-oxoguanosine (loxoribine). *Int J Immunopharmacol.* 1992 Nov;14(8):1375-82.

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

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