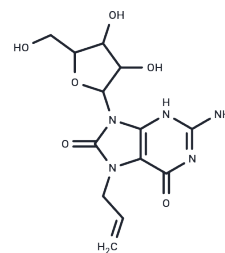


## Loxoribine

## Chemical Properties

CAS No. :	121288-39-9
Formula:	C <sub>13</sub> H <sub>17</sub> N <sub>5</sub> O <sub>6</sub>
Molecular Weight:	339.3
Appearance:	no data available
Storage:	Powder: -20°C for 3 years   In solvent: -80°C for 1 year



## Biological Description

Description	Loxoribine (RWJ 21757) is a guanosine analog. Loxoribine is an orally bioavailable and selective Toll-like receptor (TLR) 7 agonist. It has anti-viral and anti-tumor activities. Loxoribine is a potent new immunostimulant with a relatively broad spectrum of immunobiological activities.
Targets(IC50)	Influenza Virus,TLR
In vitro	Loxoribine selectively activates innate immune system cells through the Toll-like receptor (TLR) 7/MyD88-dependent signaling pathway[1], leading to the maturation of human monocyte-derived dendritic cells (DCs) and enhancing their Th-1- and Th-17-polarizing capability[2]. Additionally, loxoribine (250 μM; 48 hours) promotes MoDCs maturation, evident from the increased expression of CD80, CD83, CD40, CD54, and CCR7 [2].
In vivo	In vivo, Loxoribine (2 mg; s.c.or i.v.) activates murine natural killer (NK) cells[3].

## Solubility Information

Solubility	DMSO: 27.5 mg/mL (81.05 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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## Preparing Stock Solutions

	1mg	5mg	10mg
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
50 mM	0.0589 mL	0.2947 mL	0.5894 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

### Reference

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.

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.

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.

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