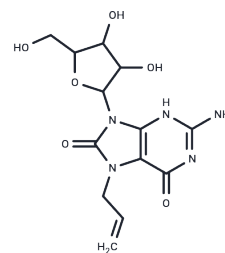


Loxoribine

Chemical Properties

| | |
|-------------------|---|
| CAS No. : | 121288-39-9 |
| Formula: | C ₁₃ H ₁₇ N ₅ O ₆ |
| Molecular Weight: | 339.3 |
| Storage: | Powder: -20°C for 3 years In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA. |



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) |
| In vivo Formulation | 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (5.89 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i> |

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.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

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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