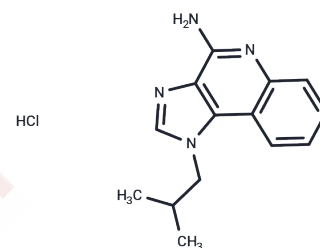


## Imiquimod hydrochloride

## Chemical Properties

CAS No. :	99011-78-6
Formula:	C <sub>14</sub> H <sub>17</sub> ClN <sub>4</sub>
Molecular Weight:	276.77
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	Imiquimod hydrochloride (R 837 hydrochloride) is a selective toll-like receptor 7 (TLR7) agonist and immune response modulator with antiviral and antitumor activities. It is used in the study of external genital warts, perianal warts, cancer, COVID-19, pemphigus foliaceus, skin cancer, and psoriasis, and is commonly employed to establish psoriasis models.
Targets(IC50)	TLR
In vivo	Imiquimod hydrochloride stimulates innate immune responses by inducing synthesis and release of cytokines, including interferon- $\alpha$ (IFN- $\alpha$ ), interleukin-6 (IL-6), and tumor necrosis factor- $\alpha$ (TNF- $\alpha$ )[1].

## Solubility Information

Solubility	Methanol: 15 mg/mL (54.2 mM),Sonication is recommended. DMSO: 5 mg/mL (18.07 mM),Sonication and heating are recommended. Ethanol: 1 mg/mL (3.61 mM),Sonication is recommended. H <sub>2</sub> O: 2 mg/mL (7.23 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	Saline: 1.82 mg/mL (6.58 mM),when pH is adjusted to 4 with 0.1 M HCl. 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

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	1mg	5mg	10mg
1 mM	3.6131 mL	18.0655 mL	36.1311 mL
5 mM	0.7226 mL	3.6131 mL	7.2262 mL
10 mM	0.3613 mL	1.8066 mL	3.6131 mL
50 mM	0.0723 mL	0.3613 mL	0.7226 mL

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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

Athina Angelopoulou, et al. Imiquimod - A toll like receptor 7 agonist - Is an ideal option for management of COVID 19. Environ Res. 2020 Sep; 188: 109858.

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Aditya K Gupta, et al. Imiquimod: a review. J Cutan Med Surg. Nov-Dec 2002;6(6):554-60.

Michael P Schön, et al. The small antitumoral immune response modifier imiquimod interacts with adenosine receptor signaling in a TLR7- and TLR8-independent fashion. J Invest Dermatol. 2006 Jun;126(6):1338-47.

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