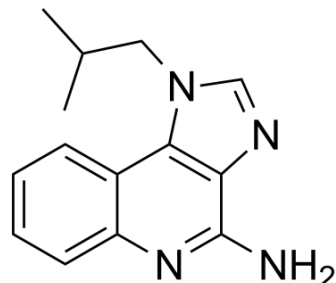


Imiquimod

Cat. No.:	HY-B0180	
CAS No.:	99011-02-6	
Molecular Formula:	C ₁₄ H ₁₆ N ₄	
Molecular Weight:	240.3	
Target:	Toll-like Receptor (TLR); Autophagy; SARS-CoV; HSV	
Pathway:	Immunology/Inflammation; Autophagy; 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

H₂O : 2.64 mg/mL (10.99 mM; ultrasonic and adjust pH to 2 with HCl)
DMSO : 2 mg/mL (8.32 mM; ultrasonic and warming and heat to 70°C)

Concentration	Solvent	Mass	1 mg	5 mg	10 mg
			1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM		4.1615 mL	20.8073 mL	41.6146 mL
	5 mM		0.8323 mL	4.1615 mL	8.3229 mL
	10 mM		0.4161 mL	2.0807 mL	4.1615 mL

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

BIOLOGICAL ACTIVITY

Description

Imiquimod (R 837) is a selective toll like receptor 7 (TLR7) agonist acting as an immune response modifier. Imiquimod exhibits antiviral and antitumor effects in vivo. Imiquimod can be used for the research of external genital, perianal warts, cancer and COVID 19^{[1][2]}.

IC₅₀ & Target

TLR7 HSV-1

In Vivo

In animal models, imiquimod stimulates the innate immune response by increasing NK cell activity, activating macrophages to secrete cytokines and nitric oxide, and inducing proliferation and differentiation of B lymphocytes. Imiquimod stimulates the innate immune response through induction, synthesis, and release of cytokines, including interferon- α (IFN- α), interleukin (IL)-6, and tumour necrosis factor (TNF)- α ^[1].

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

CUSTOMER VALIDATION

- Nat Commun. 2016 May 25;7:11724.
- Nucleic Acids Res. 2021 Jan 8;49(D1):D11113-D11121.
- Cell Rep. 2021 Feb 2;34(5):108724.
- ACS Appl Bio Mater. 2019, 2, 874-883.

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REFERENCES

- [1]. 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.
- [2]. Aditya K Gupta, et al. Imiquimod: a review. J Cutan Med Surg. Nov-Dec 2002;6(6):554-60.
- [3]. Yuji Kan, et al. Imiquimod suppresses propagation of herpes simplex virus 1 by upregulation of cystatin A via the adenosine receptor A1 pathway. J Virol. 2012 Oct;86(19):10338-46.
- [4]. 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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Caution: Product has not been fully validated for medical applications. For research use only.

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