Imiquimod maleate

Cat. No.: HY-B0180B

CAS No.: 896106-16-4

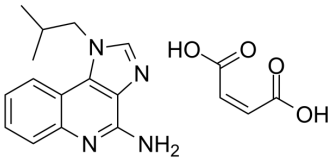
Molecular Formula: $C_{18}H_{20}N_4O_4$

Molecular Weight: 356.38

Target: Toll-like Receptor (TLR); Autophagy; SARS-CoV; HSV

Pathway: Immunology/Inflammation; Autophagy; Anti-infection

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Imiquimod maleate (R 837 maleate), an immune response modifier, is a selective toll like receptor 7 (TLR7) agonist. Imiquimod maleate exhibits antiviral and antitumor effects in vivo. Imiquimod maleate can be used for the research of external genital, perianal warts, cancer and COVID-19[1][2].	
IC_{50} & Target	TLR7	HSV-1
In Vivo	In animal models, imiquimod stimulates the innate immune response by increasing NK cell activity, activating macrophages to secretecytokines 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-a (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):D1113-D1121.
- Biomaterials. 2022 Feb 14;282:121411.
- Biomaterials. 2021, 120724.
- Cell Rep. 2021 Feb 2;34(5):108724.

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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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