

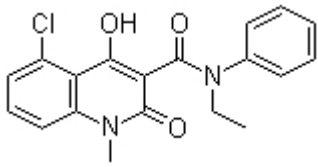


Product Introduction

Laquinimod

Laquinimod is a potent immunomodulator.

Technical Data:

Molecular Weight (MW):	356.8	
Formula:	C ₁₉ H ₁₇ ClN ₂ O ₃	
Solubility (25°C)	DMSO 61 mg/mL	
* <1 mg/ml means slightly soluble or insoluble:	Water <1 mg/mL	
	Ethanol 1 mg/mL	
Purity:	>98%	
Storage:	3 years -20°C Powder 6 months -80°C in DMSO	
CAS No.:	248281-84-7	

Biological Activity

Laquinimod treatment at 0.1-1 μ M does not affect the viability of peripheral blood mononuclear cells (PBMC). By performing the large-scale gene expression microarray analysis in PBMC from healthy subjects or relapsing-remitting multiple sclerosis (RRMS) patients, Laquinimod is shown to induce suppression of genes related to antigen presentation and corresponding inflammatory pathways. Laquinimod induces activation of Th2 response in CD14⁺ and CD4⁺ cells and suppression of proliferation in CD8⁺ cells. Laquinimod displays significant effects on immune modulation related to the suppression of antigen presenting mechanism followed by a decrease of chemotaxis and adhesion, and exhibits potent anti-inflammatory potency through the suppression of the NF- κ B pathway that concordantly leads to the

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activation of apoptosis of immuno-competent cells. [5]

Administration of Laquinimod (0.16-16 mg/kg/day) dose-dependently inhibits the incidence of experimental autoimmune neuritis (EAN) in Lewis rats, ameliorates clinical signs and inhibits P0 peptide 180-199-specific T cell responses as well as the inflammation and demyelination in the peripheral nerves, suggesting that Laquinimod may mediate its effects by regulation of Th1/Th2 cytokine balance. [1] Laquinimod significantly inhibits the development of murine acute experimental autoimmune encephalomyelitis (EAE), being approximately 20 times more potent than the immunomodulator roquinimex. [2] Laquinimod treatment inhibits the development of experimental autoimmune encephalomyelitis (EAE) in the Lewis rat in a dose-dependent manner, and shows better disease inhibitory effects as compared to roquinimex (Linomide). [3] Laquinimod potently inhibits the development of chronic experimental autoimmune encephalomyelitis (chEAE) in IFN-beta k.o. mice and wild type mice. [4] Laquinimod reduces clinical signs, inflammation, and demyelination in C57BL/6 mice with active EAE induced with MOG(35-55) peptide, and down-regulates VLA-4-mediated adhesiveness and pro-inflammatory cytokines such as IL-17. [6] The study of Laquinimod in the mice model of EAE using a conditional BDNF knockout strain lacking BDNF expression in myeloid cells and T cells (LLF mice) indicates Laquinimod also modulates autoimmune demyelination via induction of brain-derived neurotrophic factor (BDNF). [7]

References

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