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产品名称: **Laquinimod**
产品别名: 拉喹莫德 ; **ABR-215062**

生物活性:				
Description	Laquinimod is a potent immunomodulator which prevents neurodegeneration and inflammation in the central nervous system.			
IC ₅₀ & Target	NF-κB			
In Vitro	Laquinimod reverses EAE and inhibits pathogenic T cell immune responses. Laquinimod reverses RR-EAE and inhibits inflammatory T cell responses via a direct effect on myeloid APC. Laquinimod alters myeloid APC subsets and inhibits Th1 and Th17 polarization of myelin-specific T cells. Laquinimod-induced type II (M2) monocytes reverse established EAE[1]. Laquinimod modulates the phenotype of B cells of healthy donors. Laquinimod modulates expression of markers related to regulatory capacity in B cells of RRMS patients. Laquinimod reduces IFNγ cytokine expression in CD4+ T cells[2].			
In Vivo	Laquinimod treatment inhibits donor myelin-specific T cells from transferring EAE to naive recipient mice. In vivo laquinimod treatment alters subpopulations of myeloid antigen presenting cells (APC) that include a decrease in CD11c ⁺ CD11b ⁺ CD4 ⁺ dendritic cells (DC) and an elevation of CD11b ^{hi} Gr1 ^{hi} monocytes[1].			
Solvent&Solubility	In Vitro: DMSO : 100 mg/mL (280.27 mM; Need ultrasonic)			
	Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg
		1 mM	2.8027 mL	14.0135 mL
		5 mM	0.5605 mL	2.8027 mL
		10 mM	0.2803 mL	1.4013 mL
	*请根据产品在不同溶剂中的溶解度选择合适的溶剂配制储备液。一旦配成溶液，请分装保存，避免反复冻融造成的产品失效。			
	储备液的保存方式和期限：-80℃，6 months；-20℃，1 month。-80℃ 储存时，请在 6 个月内使用，-20℃ 储存时，请在 1 个月内使用。			
	In Vivo: 请根据您的实验动物和给药方式选择适当的溶解方案。以下溶解方案都请先按照 In Vitro 方式配制澄清的储备液，再依次添加助溶剂： ——为保证实验结果的可靠性，澄清的储备液可以根据储存条件，适当保存；体内实验的工作液，建议您现用现配，当天使用； 以下溶剂前显示的百分比是指该溶剂在您配制终溶液中的体积占比；如在配制过程中出现沉淀、析出现象，可以通过加热和/或超声的方式助溶			
	1.请依序添加每种溶剂： 10% DMSO→40% PEG300 →5% Tween-80 → 45% saline Solubility: ≥ 2.5 mg/mL (7.01 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (7.01 mM, 饱和度未知) 的澄清溶液。 以 1 mL 工作液为例，取 100 μL 25.0 mg/mL 的澄清 DMSO 储备液加到 400 μL PEG300 中，混合均匀，向上述体系中加入 50 μL Tween-80，混合均匀；然后继续加入 450 μL 生理盐水定容至 1 mL。			
	2.请依序添加每种溶剂： 10% DMSO →90% corn oil Solubility: ≥ 2.5 mg/mL (7.01 mM); Clear solution			



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	此方案可获得 ≥ 2.5 mg/mL (7.01 mM, 饱和度未知) 的澄清溶液, 此方案不适用于实验周期在半个月以上的实验。 以 1 mL 工作液为例, 取 100 μL 25.0 mg/mL 的澄清 DMSO 储备液加到 900 μL 玉米油中, 混合均匀。
References	[1]. Schulze-Topphoff, Ulf., et al. Laquinimod, a quinoline-3-carboxamide, induces type II myeloid cells that modulate central nervous system autoimmunity. PLoS One (2012), 7(3), e33797. [2]. Toubi E, et al. Laquinimod modulates B cells and their regulatory effects on T cells in Multiple Sclerosis. J Neuroimmunol. 2012 Oct 15;251(1-2):45-54. [3]. Brück W, et al. Reduced astrocytic NF-κB activation by laquinimod protects from cuprizone-induced demyelination. Acta Neuropathol. 2012 Sep;124(3):411-24.
实验参考:	
Cell Assay	Purified CD11b⁺ cells from laquinimod- or vehicle-treated mice are cultured with naive CD4⁺ cells isolated from laquinimod- or vehicle-treated 2D2 mice and antigen (MOG p35-55, 20 μg/mL). Cells are cultured in 96-well microtitre plates at a concentration of 0.25×10^6 cells/mL. Culture medium consisted of RPMI 1640 supplemented with L-glutamine (2 mM), sodium pyruvate (1 mM), penicillin (100 U/mL), streptomycin (0.1 mg/mL), 2-mercaptoethanol (5×10^{-5} M) and 10% (v/v) fetal bovine serum. Cells are incubated for 48 h and pulsed for 18 h with 1 μCi per well of [³H]-thymidine before harvesting. [1]
Animal Administration	Seven to 10-week-old female C57BL/6, DBA/1 or SJL/J mice are injected subcutaneously with 50 μg MOG p35-55, 50 μg rMOG or 100 μg PLP p139-151, respectively, in complete Freund's adjuvant. After immunization and 2 days later, mice receive 200 ng (C57BL/6) or 100 ng (SJL/J) pertussis toxin intraperitoneally (i.p.). For adoptive transfer, donor SJL/J mice are immunized as described above and treated daily with laquinimod or vehicle. 10 days later, cells from draining lymph nodes and spleen are isolated, re-stimulated for 48 h (20 μg/mL PLP p139-151), and injected i.p. into naive SJL/J recipients (10^7 cells per mouse). Animals are observed daily and clinical scores are assessed as follows: 0, no signs; 1, decreased tail tone; 2, mild monoparesis or paraparesis; 3, severe paraparesis; 4, paraplegia and/or quadraparesis; and 5, moribund or death. [1]
References	[1]. Schulze-Topphoff, Ulf., et al. Laquinimod, a quinoline-3-carboxamide, induces type II myeloid cells that modulate central nervous system autoimmunity. PLoS One (2012), 7(3), e33797. [2]. Toubi E, et al. Laquinimod modulates B cells and their regulatory effects on T cells in Multiple Sclerosis. J Neuroimmunol. 2012 Oct 15;251(1-2):45-54. [3]. Brück W, et al. Reduced astrocytic NF-κB activation by laquinimod protects from cuprizone-induced demyelination. Acta Neuropathol. 2012 Sep;124(3):411-24.