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产品名称：2,4-二氯-N-(异丙基)-N-[2-[(异丙基)氨基]乙基]苯磺酰胺
产品别名：RN-1734

生物活性：

Description	RN-1734 is selective antagonist of the TRPV4 channel, completely antagonizes 4αPDD-mediated activation of TRPV4 with comparable, low micromolar IC50s for all three species (hTRPV4: 2.3 μM, mTRPV4: 5.9 μM, rTRPV4: 3.2 μM)[1]. RN-1734 clearly decreases the production of tumor necrosis factor α (TNF-α) and interleukin 1β (IL-1β) without altering the number of olig2-positive cells[2].	
IC_{50} & Target	IC50: 2.3 μM (hTRPV4), 5.9 μM (mTRPV4), 3.2 μM (rTRPV4)[1]	
In Vitro	RN-1734 (27 hours; 10μM) reverses the increase in the apoptotic rate of oligodendrocytes induced by CM (LPS-activated microglia group) apoptosis[2]. RN-1734 (27 hours; 10μM) alleviates CM-induced decreases in CNP[2].	
	Apoptosis Analysis[2]	
	Cell Line:	Microglial cells
	Concentration:	27 hours
	Incubation Time:	10μM
	Result:	Significantly decreased the percentage of cleaved-caspase 3 positive cells.
	Western Blot Analysis[2]	
	Cell Line:	Microglial cells
	Concentration:	27 hours
	Incubation Time:	10 μM
	Result:	Alleviated CM (with LPS only)-induced decreases in CNP.
In Vivo	RN-1734 (0.5 μl; microinjector pump; daily for 5 weeks) significantly reverses the decrease in CNP protein and improves myelination in CPZ-induced demyelination mouse[2].	
	Animal Model:	CPZ-induced demyelination mouse model (C57BL/6 male mice)[2]
	Dosage:	0.5 μl (10 μM in 5% DMSO and 0.9% NaCl)
	Administration:	Microinjector pump for 5 weeks
	Result:	Significantly reversed the decrease in CNP protein and improved myelination in CPZ-induced demyelination mouse.

In Vitro:

DMSO : 50 mg/mL (141.52 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	**1 mg**	**5 mg**	**10 mg**
	1 mM	2.8304 mL	14.1519 mL	28.3038 mL
	5 mM	0.5661 mL	2.8304 mL	5.6608 mL
	10 mM	0.2830 mL	1.4152 mL	2.8304 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°C, 6 months; -20°C, 1 month。-80°C 储存时，请在 6 个月内使用，-20°C 储存时，请在 1 个月内使用。

In Vivo:

Solvent&Solubility	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: ≥ 3.25 mg/mL (9.20 mM); Clear solution 此方案可获得 ≥ 3.25 mg/mL (9.20 mM，饱和度未知) 的澄清溶液。 以 1 mL 工作液为例，取 100 μL 32.5 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% (20% SBE-β-CD in saline) Solubility: ≥ 3.25 mg/mL (9.20 mM); Clear solution 此方案可获得 ≥ 3.25 mg/mL (9.20 mM，饱和度未知) 的澄清溶液。 以 1 mL 工作液为例，取 100 μL 32.5 mg/mL 的澄清 DMSO 储备液加到 900 μL 20% 的 SBE-β-CD 生理盐水水溶液中，混合均匀。 3.请依序添加每种溶剂： 10% DMSO →90% corn oil Solubility: ≥ 3.25 mg/mL (9.20 mM); Clear solution 此方案可获得 ≥ 3.25 mg/mL (9.20 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 32.5 mg/mL 的澄清 DMSO 储备液加到 900 μL 玉米油中，混合均匀。
References	[1]. Kato K, et al. Acidosis environment promotes osteoclast formation by acting on the last phase of preosteoclast differentiation: a study to elucidate the action points of acidosis and search for putative target molecules. Eur J Pharmacol. 2011 Aug 1;663(1-3):27-39. [2]. Liu M, et al. TRPV4 Inhibition Improved Myelination and Reduced Glia Reactivity and Inflammation in a Cuprizone-Induced Mouse Model of Demyelination. Front Cell Neurosci. 2018 Nov 5;12:392. [3]. Vincent F, et al. Identification and characterization of novel TRPV4 modulators. Biochem Biophys Res Commun. 2009 Nov 20;389(3):490-4.