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产品名称: **CX 546**
产品别名: **CX546**

生物活性:					
Description	CX546 is a selective positive AMPAR modulator; the prototypical ampakine agent. IC50 value: Target: AMPAR agonist in vitro: Treatments with the ampakine CX614 markedly and reversibly increased brain-derived neurotrophic factor (BDNF) mRNA and protein levels in cultured rat entorhinal/hippocampal slices [1]. in contrast to cyclothiazide or IDRA 21, the Ampakine CX546 binds specifically to the agonist bound nondesensitized receptor, most likely acting by destabilizing the desensitized receptor conformation [2]. In binding tests, CX546 caused an approximately 2-fold increase in the affinity for radiolabeled agonists, whereas CX516 was ineffective [3]. in vivo: Intraperitoneal injections of CX546 increased hippocampal BDNF mRNA levels in aged rats and middle-aged mice [1]. Administration of the positive modulator of alpha-amino-3-hydroxy-5-methyl-4-isoxazole-propionic acid receptors (AMPA), CX546, during the conditioning phase only, improved the disrupted LI in mGluR5 knockout mice and facilitated LI in control C57BL/6J mice, given extended number of conditioning trails (four conditioning stimulus-unconditioned stimulus) [4].				
	In Vitro: Ethanol : 100 mg/mL (404.38 mM; Need ultrasonic) H₂O : 2 mg/mL (8.09 mM; Need ultrasonic)				
Solvent&Solubility	Preparing	Solvent	Mass		
		Concentration			
	Stock Solutions	1 mM	4.0438 mL	20.2192 mL	40.4384 mL
		5 mM	0.8088 mL	4.0438 mL	8.0877 mL
		10 mM	0.4044 mL	2.0219 mL	4.0438 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 (10.11 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (10.11 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 EtOH 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)					



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References	[1]. Lauterborn JC, et al. Positive modulation of AMPA receptors increases neurotrophin expression by hippocampal and cortical neurons. J Neurosci. 2000 Jan 1;20(1):8-21. [2]. Nagarajan N, et al. Mechanism and impact of allosteric AMPA receptor modulation by the ampakine CX546. Neuropharmacology. 2001 Nov;41(6):650-63. [3]. Arai AC, et al. Benzamide-type AMPA receptor modulators form two subfamilies with distinct modes of action. J Pharmacol Exp Ther. 2002 Dec;303(3):1075-85. [4]. Lipina T, et al. The ampakine CX546 restores the prepulse inhibition and latent inhibition deficits in mGluR5-deficient mice. Neuropsychopharmacology. 2007 Apr;32(4):745-56.

源叶生物