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产品名称: 5-硝基-2-(3-苯丙胺)苯甲酸  
产品别名: NPPB

生物活性:					
Description		NPPB is a blocker of the outwardly rectifying chloride channel (ORCC).			
IC <sub>50</sub> & Target		ORCC[1]			
In Vitro		0.1 mM NPPB in the bath solution reduces channel open probability from 0.89±0.06 to 0.11±0.04 (n=5, P<0.01)[1]. Dose-dependent inhibition of chloride currents is observed with a 50% inhibitory concentration (IC <sub>50</sub> ) of 125 μM NPPB. NPPB itself also shows cytotoxicity against glioma cells with a GI <sub>50</sub> of approximately 500 μM[2].			
Solvent&Solubility	<b>In Vitro:</b> DMSO : 150 mg/mL (499.48 mM; Need ultrasonic and warming)				
	Preparing Stock Solutions	<div>Solvent / Mass Concentration</div>	1 mg	5 mg	10 mg
		1 mM	3.3299 mL	16.6495 mL	33.2989 mL
		5 mM	0.6660 mL	3.3299 mL	6.6598 mL
		10 mM	0.3330 mL	1.6649 mL	3.3299 mL
	<p>*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。</p> <p>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。</p> <p><b>In Vivo:</b></p> <p>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:</p> <p>——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</p> <p>1.请依序添加每种溶剂: 10% DMSO→40% PEG300 →5% Tween-80 → 45% saline</p> <p>Solubility: ≥ 2.5 mg/mL (8.32 mM); Clear solution</p> <p>此方案可获得 ≥ 2.5 mg/mL (8.32 mM, 饱和度未知) 的澄清溶液。</p> <p>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。</p>				
	References				
	[1]. Li J, et al. Enhancement of an outwardly rectifying chloride channel in hippocampal pyramidal neurons after cerebral ischemia. Brain Res. 2016 Aug 1;1644:107-17.				
	[2]. Park M, et al. Double Blockade of Glioma Cell Proliferation and Migration by Temozolomide Conjugated withNPPB, a Chloride Channel Blocker. ACS Chem Neurosci. 2016 Mar 16;7(3):275-85.				
	实验参考:				
		Cells are seeded in the 96-well microtiter plate at a density of 5×10 <sup>3</sup> cells per well and incubated at 37°C for 24 h in a humidified 5% CO <sub>2</sub> atmosphere. After removing the culture medium, fresh media containing various concentrations of NPPB is added, and incubated for 24 h. Next, 100 μL of Thiazolyl blue			



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<b>Cell Assay</b>	tetrazolium bromide at 0.5 mg/mL is added to each well and incubated at 37°C for 1 h. Cells are then dissolved in 100 $\mu$ L of DMSO, and the absorbance is measured at 570 nm with a Microplate Reader. Concentration-response curves of NPPB are fitted to a Hill equation to obtain $GI_{50}$ and $GI_{80}$ (50% and 80% growth inhibition concentrations, respectively) values <sup>[2]</sup> .
<b>References</b>	<p>[1]. Li J, et al. Enhancement of an outwardly rectifying chloride channel in hippocampal pyramidal neurons after cerebral ischemia. Brain Res. 2016 Aug 1;1644:107-17.</p> <p>[2]. Park M, et al. Double Blockade of Glioma Cell Proliferation and Migration by Temozolomide Conjugated withNPPB, a Chloride Channel Blocker. ACS Chem Neurosci. 2016 Mar 16;7(3):275-85.</p>



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