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产品名称: **SUN11602**
产品别名: **SUN11602**

生物活性:				
Description	SUN11602 is a novel aniline compound with basic fibroblast growth factor-like activity.			
In Vitro	SUN11602 prevents glutamate-induced neuronal death in primary cultures of rat cerebrocortical neurons. SUN11602 increases the levels of CALB1 gene expression in cerebrocortical neurons[1]. SUN11602 exerts protective effects on hippocampal neurons through activation of FGFR1 and increases Calb expression[2]. SUN11602 promotes neurite outgrowth of primarily cultured rat hippocampal neurons[3].			
In Vivo	In WT mice, SUN11602 increases the levels of newly synthesized Calb in cerebrocortical neurons and suppresses the glutamate-induced rise in intracellular Ca ²⁺ . This Ca ²⁺ -capturing ability of Calb allows the neurons to survive severe toxic conditions of glutamate[1]. Oral administration of SUN11602 at the midpoint of Aβ1-40 and ibotenate injections attenuate short-term memory impairment in the Y-maze test, as well as spatial learning deficits in the water maze task. In addition, the SUN11602 treatment inhibits the increase of peripheral-type benzodiazepine-binding sites (PTBBS), which are a marker for gliosis[3].			
Solvent&Solubility	In Vitro: DMSO : ≥ 37 mg/mL (81.93 mM) * "≥" means soluble, but saturation unknown.			
	Preparing Stock Solutions	Solvent	Mass	Concentration
		1 mg		
		5 mg		
		10 mg		
		1 mM	2.2143 mL	11.0717 mL
		5 mM	0.4429 mL	2.2143 mL
		10 mM	0.2214 mL	1.1072 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 (5.54 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (5.54 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% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (5.54 mM); Clear solution			



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	<p>此方案可获得 ≥ 2.5 mg/mL (5.54 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 900 μL 20% 的 SBE-β-CD 生理盐水溶液中, 混合均匀。</p> <p>3.请依序添加每种溶剂: 10% DMSO \rightarrow 90% corn oil</p> <p>Solubility: ≥ 2.5 mg/mL (5.54 mM); Clear solution</p> <p>此方案可获得 ≥ 2.5 mg/mL (5.54 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。</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 900 μL 玉米油中, 混合均匀。</p>
References	<p>[1]. Murayama N, et al. SUN11602, a novel aniline compound, mimics the neuroprotective mechanisms of basic fibroblast growth factor. ACS Chem Neurosci. 2013 Feb 20;4(2):266-76.</p> <p>[2]. Murayama N, et al. SUN11602-induced hyperexpression of calbindin D-28k is pivotal for the survival of hippocampal neurons under neurotoxic conditions. Brain Res. 2015 Jan 12;1594:71-81.</p> <p>[3]. Ogino R, et al. SUN11602 has basic fibroblast growth factor-like activity and attenuates neuronal damage and cognitive deficits in a rat model of Alzheimer's disease induced by amyloid β and excitatory amino acids. Brain Res. 2014 Oct 17;1585:159-66.</p>
实验参考:	
Cell Assay	<p>Cerebrocortical neurons are pretreated with vehicle (Hanks' Balanced Salt Solution), SUN11602, bFGF, or the other growth factors for 24 h prior to the onset of glutamate toxicity. Subsequently, 10 μL of the MTT solution (5 mg/mL) is added to each well (200 μL of culture medium) of the microplates. Neurons in each well are then dried for 24 h, and 200 μL of DMSO is poured into all of the wells in order to dissolve the reaction products thoroughly for the MTT assay[1].</p>
Animal Administration	<p>Rats: SUN11602 (0.1,1,and10mg/kg)is administered orally to the rat hippocampal-lesion model, once at 24 h after the Aβ1-40 injection. In the vehicle-treated groups, saline is administered instead of SUN11602[3].</p>
References	<p>[1]. Murayama N, et al. SUN11602, a novel aniline compound, mimics the neuroprotective mechanisms of basic fibroblast growth factor. ACS Chem Neurosci. 2013 Feb 20;4(2):266-76.</p> <p>[2]. Murayama N, et al. SUN11602-induced hyperexpression of calbindin D-28k is pivotal for the survival of hippocampal neurons under neurotoxic conditions. Brain Res. 2015 Jan 12;1594:71-81.</p> <p>[3]. Ogino R, et al. SUN11602 has basic fibroblast growth factor-like activity and attenuates neuronal damage and cognitive deficits in a rat model of Alzheimer's disease induced by amyloid β and excitatory amino acids. Brain Res. 2014 Oct 17;1585:159-66.</p>