



上海源叶生物科技有限公司
Shanghai yuanye Bio-Technology Co., Ltd
电话: 021-61312973 传真: 021-55068248
网址: www.shyuanye.com
邮箱: shyysw@sina.com

产品名称: **LM22B-10**
产品别名: **LM22B-10**

生物活性:				
Description	LM22B-10 is an activator of TrkB/TrkC neurotrophin receptor, and can induce TrkB, TrkC, AKT and ERK activation in vitro and in vivo.			
IC ₅₀ & Target	TrkB	TrkC	Akt	ERK
In Vitro	LM22B-10 exhibits maximum neurotrophic survival activity levels that are higher than those maximally achieved with BDNF (53 ± 7.2% above BDNF at 0.7 nM) and NT-3 (91 ± 8.6% above NT-3 at 0.7 nM) with an EC ₅₀ value of 200-300 nM. LM22B-10 (1000 nM) induces neurites of significantly larger average lengths, up to -40 μM. LM22B-10 (250-2000 nM) binds to TrkB-Fc and TrkC-Fc in a dose-dependent manner. LM22B-10 inhibits binding of BDNF to TrkB-expressing cells and NT-3 to TrkC-expressing cells. LM22B-10 promotes cell survival and functions preferentially through TrkB and TrkC. LM22B-10, but not BDNF or NT-3, promotes neurite outgrowth in an inhibitory environment. LM22B-10 induces patterns of Trk and downstream signaling activation that are distinct from those of BDNF and NT-3. LM22B-10 also induces TrkB, TrkC, AKT and ERK activation in hippocampal neurons in culture[1].			
In Vivo	LM22B-10 (0.5 mg/kg) activates TrkB, TrkC, AKT and ERK in C57BL/6J mice. LM22B-10 (50 mg/kg, i.p.) shows increased phosphorylation at TrkB ^{Y817} and TrkC ^{Y820} . LM22B-10 activates synaptic TrkB and TrkC and increases pre- and post-synaptic proteins and spine density in aged mice[1].			
Solvent&Solubility	In Vitro: DMSO : ≥ 150 mg/mL (309.27 mM) * "≥" means soluble, but saturation unknown.			
	Preparing Stock Solutions	Solvent	Mass	
		Concentration		
		1 mM	2.0618 mL	10.3091 mL
		5 mM	0.4124 mL	2.0618 mL
		10 mM	0.2062 mL	1.0309 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 (5.15 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (5.15 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			



上海源叶生物科技有限公司
Shanghai yuanye Bio-Technology Co., Ltd
电话: 021-61312973 传真: 021-55068248
网址: www.shyuanye.com
邮箱: shyysw@sina.com

	<p>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> <p>2.请依序添加每种溶剂: 10% DMSO\rightarrow 90% (20% SBE-β-CD in saline)</p> <p>Solubility: \geq 2.5 mg/mL (5.15 mM); Clear solution</p> <p>此方案可获得 \geq 2.5 mg/mL (5.15 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: \geq 2.5 mg/mL (5.15 mM); Clear solution</p> <p>此方案可获得 \geq 2.5 mg/mL (5.15 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	[1]. Yang T, et al. A small molecule TrkB/TrkC neurotrophin receptor co-activator with distinctive effects on neuronal survival and process outgrowth. Neuropharmacology. 2016 Nov;110(Pt A):343-61.
实验参考:	
Cell Assay	Mouse NIH-3T3 cells, mouse NIH-3T3 cells expressing TrkA (NIH-3T3-TrkA) or p75NTR (NIH-3T3-p75NTR), and NIH-3T3 cells expressing TrkB (NIH-3T3-TrkB) or TrkC (NIH-3T3-TrkC) are propagated in DMEM supplemented with 10% FBS and 200-400 μ g/mL Geneticin (for Trk-expressing cells) or 400 μ g/mL hygromycin (for p75NTR-expressing cells). Cells are seeded into 24-well plates (30,000 cells/well) and cultured in medium consisting of 50% PBS and 50% DMEM without supplements. Following exposure to growth factors (0.7 nM) or 1000 nM LM22B-10 for 72-96 h, cells are suspended in 50 μ L lysis buffer, transferred to opaque 96-well culture plates and survival is measured using the ViaLight Assay. [1]
References	[1]. Yang T, et al. A small molecule TrkB/TrkC neurotrophin receptor co-activator with distinctive effects on neuronal survival and process outgrowth. Neuropharmacology. 2016 Nov;110(Pt A):343-61.