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：SUCCINYL-ASP-PHE-ME-PHE-GLY-LEU-MET-NH2
产品别名：Senktide

生物活性：

Description	Senktide is a tachykinin NK_3 receptor agonist.
IC_{50} & Target	NK3 receptor[1]
In Vitro	The selective NK3 receptor agonist Senktide excites 24 of 31 dopaminergic neurons in the substantia nigra pars compacta in a concentration-dependent manner. The effective concentration range is between 3 to 3000 nm. The mean EC50 for Senktide is 41.2±9 nm (n=5)[2].
In Vivo	I.c.v. injection of Senktide causes a dose-dependent increase in total distance traveled ($F_{6,72}$=6.344, P<0.001). This increase reaches statistical significance compare to the vehicle-treated group at 0.06 nmol and higher. The Senktide-induced increase in locomotor activity brought about by 0.1 nmol of Senktide is significantly and dose-dependently decreased by the tachykinin NK_3 receptor antagonists talnetant at 30 mg/kg and SB222200 at 30 mg/kg, but not by osanetant, when tested in parallel in a single experiment ($F_{7,78}$=10.32, P<0.001), although a non-significant reduction is observed. However, when tested using another vehicle (Vitamin E and glycofurol), osanetant does decrease activity significantly compare to Senktide-treated gerbils ($F_{2,30}$=10.10, P<0.001)[1].

Solvent&Solubility

In Vitro:

DMSO： 50 mg/mL (59.38 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.1877 mL	5.9385 mL	11.8769 mL
	5 mM	0.2375 mL	1.1877 mL	2.3754 mL
	10 mM	0.1188 mL	0.5938 mL	1.1877 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:

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 (2.97 mM); Clear solution

此方案可获得 ≥ 2.5 mg/mL (2.97 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 (2.97 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (2.97 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 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: ≥ 2.5 mg/mL (2.97 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (2.97 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 25.0 mg/mL 的澄清 DMSO 储备液加到 900 μL 玉米油中，混合均匀。
References	[1]. Nordquist RE, et al. The tachykinin NK3 receptor agonist senktide induces locomotor activity in male Mongolian gerbils. Eur J Pharmacol. 2008 Dec 14;600(1-3):87-92. [2]. Keegan KD, et al. The selective NK3 receptor agonist senktide excites a subpopulation of dopamine-sensitiveneurones in the rat substantia nigra pars compacta in vitro. Br J Pharmacol. 1992 Jan;105(1):3-5.

实验参考：

Cell Assay	Experiments are performed on brain slices (300 μM thick) from 150 g male Wistar rats and extracellular recordings are made by conventional techniques. Drugs (including Senktide) are applied by bath perfusion and removal is achieved simply by returning to the control drug-free solution. Extracellular electrodes are filled with aCSF and have resistances of 5 to 14 MΩ. For intracellular recordings, electrodes are filled with 1 M potassium acetate and have d.c. resistances of 70 to 110 MΩ. Neurons are considered to be dopaminergic if they have a characteristic waveform, slow firing rate (~5 Hz) and inhibitory response to dopamine[2].
Animal Administration	For the Senktide dose-response curve, gerbils are first allowed to habituate to the test area for 30 min. Animals (n=10 to 12 per drug treatment group) are anesthetized with isoflurane, a small incision is made in the skin over bregma, and an injection of Senktide at 0.01, 0.03, 0.06, 0.1, 0.3 or 0.6 nmol in 5 μL of vehicle is placed i.c.v. using a syringe with a 4.5 mm long needle. Wounds are clipped shut, and animals allowed to awaken from anesthesia, then placed directly into the locomotor activity boxes and recording commenced. For testing of the NK_1 receptor antagonist aprepitant (1, 3 or 10 mg/kg p.o.), gerbils are first treated with aprepitant or vehicle (0.9% NaCl with 0.3% Tween80) and returned to the home cage for 90 min. Animals are then placed in the open field for 30 min of habituation. During the last 5 min of habituation, 0.03 nmol Senktide is injected i.c.v[1].
References	[1]. Nordquist RE, et al. The tachykinin NK3 receptor agonist senktide induces locomotor activity in male Mongolian gerbils. Eur J Pharmacol. 2008 Dec 14;600(1-3):87-92. [2]. Keegan KD, et al. The selective NK3 receptor agonist senktide excites a subpopulation of dopamine-sensitiveneurones in the rat substantia nigra pars compacta in vitro. Br J Pharmacol. 1992 Jan;105(1):3-5.