

产品名称：阿尼西坦
产品别名：Aniracetam; Ro 13-5057

生物活性:

Description

Aniracetam(Ro 13-5057) is a nootropics and neuroprotective drug, which is selectively modulates the AMPA receptor and nAChR. Target: AMPA; nAChR Aniracetam is an ampakine and nootropic of the racetam chemical class purported to be considerably more potent than piracetam. It selectively modulates the AMPA receptor. It is lipid soluble and has possible cognition enhancing effects. It has been tested in animals extensively, Alzheimer's patients and temporarily-impaired healthy subjects. It has shown potential as an anxiolytic in three clinical animal models [1]. Administration of aniracetam for 10 days (post-natal days (PND) 18-27), at a dose of 50 mg/kg reversed cognitive deficits in both rat genders, indicated by a significant increase in the number of avoidances and the number of 'good learners'. After the termination of the nootropic treatment, a significant increase in both amplitude and frequency of AMPA receptor-mediated mEPSCs in hippocampal CA-1 pyramidal cells was observed [2]. Clinical indications: Cognitive disorder; Stroke FDA Approved Date: Toxicity: insomnia; headaches; nausea or rash.

In Vitro:

DMSO : ≥ 100 mg/mL (456.12 mM)

H₂O : 0.33 mg/mL (1.51 mM; Need ultrasonic)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Mass Concentration	1 mg	5 mg	10 mg
	1 mM	4.5612 mL	22.8061 mL	45.6121 mL
	5 mM	0.9122 mL	4.5612 mL	9.1224 mL
	10 mM	0.4561 mL	2.2806 mL	4.5612 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 (11.40 mM); Clear solution

此方案可获得 ≥ 2.5 mg/mL (11.40 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 (11.40 mM); Clear solution

此方案可获得 ≥ 2.5 mg/mL (11.40 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

Solvent&Solubility

	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 (11.40 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (11.40 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]. Nakamura K, et al. Anxiolytic effects of aniracetam in three different mouse models of anxiety and the underlying mechanism. Eur J Pharmacol. 2001 May 18;420(1):33-43. [2]. Vaglenova J, et al. Aniracetam reversed learning and memory deficits following prenatal ethanol exposure by modulating functions of synaptic AMPA receptors. Neuropsychopharmacology. 2008 Apr;33(5):1071-83. Epub 2007 Jul 4.



源叶生物