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产品名称：5’-Ethylcarboxamido Adenosine
产品别名：5'-N-Ethylcarboxamidoadenosine； NECA

生物活性：

Description	5'-N-Ethylcarboxamidoadenosine (NECA) is a nonselective adenosine receptor agonist.
IC_{50} & Target	Adenosine receptor[1]
In Vivo	After the administration of 5'-N-Ethylcarboxamidoadenosine (NECA), the mean number of cocaine infusions obtained per session is decreased significantly in a dose-dependent manner [5'-N-Ethylcarboxamidoadenosine (NECA): F(4,12)=14.9; P<0.001]. The administration of 5'-N-Ethylcarboxamidoadenosine (NECA) [F(4,12)=16.1; P<0.001] results in a significant increase in latencies above values obtained for vehicle treatment[1]. Daily i.p. injection of 5'-N-Ethylcarboxamidoadenosine (NECA) at 0.3 mg/kg/day for two weeks reduces malondialdehyde (MDA) levels in diabetic rats, but does not affect control rats. Daily treatment with NECA (0.3 mg/kg/day, i.p. for two weeks) reduces diabetes-induced gene expression of tumor necrosis factor (TNF)-α and interleukin (IL)-18 in diabetic rats, but does not affect control rats. Daily i.p. injection of 5'-N-Ethylcarboxamidoadenosine (NECA) at 0.3 mg/kg/day for two weeks also blocks the activation of JNK MAPK in diabetic rats, but does not affect control rats[2].
Solvent&Solubility	***In Vitro:*** **DMSO： ≥ 150 mg/mL (486.55 mM)** * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.2437 mL	16.2185 mL	32.4370 mL
	5 mM	0.6487 mL	3.2437 mL	6.4874 mL
	10 mM	0.3244 mL	1.6218 mL	3.2437 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 (8.11 mM); Clear solution

此方案可获得 ≥ 2.5 mg/mL (8.11 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 (8.11 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (8.11 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 (8.11 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (8.11 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]. Knapp CM, et al. Adenosine agonists CGS 21680 and NECA inhibit the initiation of cocaine self-administration. Pharmacol Biochem Behav. 2001 Apr;68(4):797-803. [2]. Elsherbiny NM, et al. Reno-protective effect of NECA in diabetic nephropathy: implication of IL-18 and ICAM-1. Eur Cytokine Netw. 2012 Jul-Sep;23(3):78-86.

实验参考：

Animal Administration	Male Wistar rats are used in this experiment. These animals range in weight between 350 and 425 g. They are housed individually in hanging wire cages under a 12-h light/dark cycle. The effects of 5'-N-Ethylcarboxamidoadenosine (NECA) are tested in four rats. In the experiment, either 5'-N-Ethylcarboxamidoadenosine (NECA) (5, 7.5, 10, 20 μg/kg) or vehicle (saline) is administered intraperitoneally 15 min prior to the start of test sessions. 5'-N-Ethylcarboxamidoadenosine (NECA) is administered following a random order crossover design. In most cases, animals are tested twice with the same dose[1].
References	[1]. Knapp CM, et al. Adenosine agonists CGS 21680 and NECA inhibit the initiation of cocaine self-administration. Pharmacol Biochem Behav. 2001 Apr;68(4):797-803. [2]. Elsherbiny NM, et al. Reno-protective effect of NECA in diabetic nephropathy: implication of IL-18 and ICAM-1. Eur Cytokine Netw. 2012 Jul-Sep;23(3):78-86.