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产品名称：南昌霉素
产品别名：Nanchangmycin

生物活性：

Description	Nanchangmycin, produced by Streptomyces nanchangensis NS3226, inhibits gram-positive bacteria. Nanchangmycin is a broad spectrum antiviral active against Zika virus.
IC_{50} & Target	Bacteria[1] Zika virus[2]
In Vitro	Nanchangmycin can be used as a growth promotant in poultry and to cure coccidiosis in chickens. Nanchangmycin is active against drug resistant strains of malaria[1]. Nanchangmycin as a potent inhibitor of Zika virus (ZIKV) entry across all cell types tested including physiologically relevant primary cells. Nanchangmycin potently reduces infection of all three strains of ZIKV across all three cell types. The IC50s for infection are between 0.1 and 0.4 μM while Nanchangmycin has low toxicity in these ranges. In addition, DENV is inhibited by Nanchangmycin across cell types[2].

Solvent&Solubility

In Vitro:

DMSO : ≥ 30 mg/mL (33.74 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.1247 mL	5.6237 mL	11.2473 mL
	5 mM	0.2249 mL	1.1247 mL	2.2495 mL
	10 mM	0.1125 mL	0.5624 mL	1.1247 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 (2.81 mM); Suspended solution; Need ultrasonic

此方案可获得 2.5 mg/mL (2.81 mM)的均匀悬浊液，悬浊液可用于口服和腹腔注射。

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% corn oil

Solubility: ≥ 2.5 mg/mL (2.81 mM); Clear solution

此方案可获得 ≥ 2.5 mg/mL (2.81 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]. Liu T et al. Mechanism of thioesterase-catalyzed chain release in the biosynthesis of the polyether antibiotic nanchangmycin. Chem Biol. 2008 May;15(5):449-58. [2]. Rausch K, et al. Screening Bioactives Reveals Nanchangmycin as a Broad Spectrum Antiviral Active against Zika Virus. Cell Rep. 2017 Jan 17;18(3):804-815.