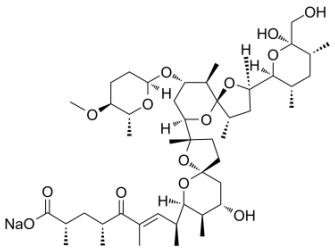
Nanchangmycin

Cat. No.:	HY-100528
CAS No.:	65101-87-3
Molecular Formula:	$C_{47}H_{77}NaO_{14}$
Molecular Weight:	889.1
Target:	Bacterial; Antibiotic
Pathway:	Anti-infection
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



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

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: 2.08 mg/mL (2.34 mM); Suspended solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: 2.08 mg/mL (2.34 mM); Suspended solution; Need ultrasonic
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (2.34 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Nanchangmycin, a polyether antibiotic produced by Streptomyces nanchangensis NS3226, inhibits gram-positive bacteria[1]. Nanchangmycin is a broad spectrum antiviral active against Zika virus[2].

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 IC_{50}s 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]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Cell Death Dis. 2020 Sep 30;11(9):818.

See more customer validations on www.MedChemExpress.com

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.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA