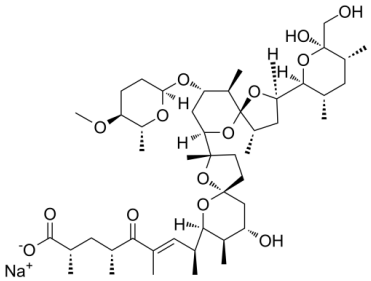
Data Sheet

Product Name:	Nanchangmycin
Cat. No.:	CS-5855
CAS No.:	65101-87-3
Molecular Formula:	C47H77NaO14
Molecular Weight:	889.10
Target:	Bacterial
Pathway:	Anti-infection
Solubility:	DMSO : ≥ 30 mg/mL (33.74 mM)



BIOLOGICAL ACTIVITY:

Nanchangmycin, produced by Streptomyces nanchangensis NS3226, inhibits gram-positive bacteria. Nanchangmycin is a broad spectrum antiviral active against Zika virus. IC50 & 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].

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.

CAIndexNames:

6-Nonenoic acid, 8-[(2S,2'R,4'S,5R,5'S,7R,7'R,8R,9S,9'S,10'R)-9-hydroxy-2,4',8,10'-tetramethyl-2'-[(2S,3S,5R,6R)-tetrahydro-6-hydroxy-6-(hydroxymethyl)-3,5-dimethyl-2H-pyran-2-yl]-9'-[[(2S,5S,6R)-tetrahydro-5-methoxy-6-methyl-2H-pyran-2-yl]oxy][2,7'-bi-1,6-dioxaspiro[4.5]dec]-7-yl]-2,4,6-trimethyl-5-oxo-, sodium salt (1:1), (2S,4R,6E,8S)-

SMILES:

C[C@H]1[C@@]2(O[C@]([C@@]3([H])O[C@](O)([C@H](C)C[C@@H]3C)CO)([H])C[C@@H]2C)O[C@]([C@]4(O[C@]5(O[C@]([C@H](C)[C@@H](O)C5)([H])[C@@H](C)/C=C(C)/C([C@H](C)C[C@H](C)C([O-])=O)=O)CC4)C)([H])C[C@@H]1O[C@@]6([H])O[C@@H]([C@@H](OC)CC6)C.[Na+]

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 732-484-9848 Fax: 888-484-5008 E-mail: sales@ChemScene.com

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