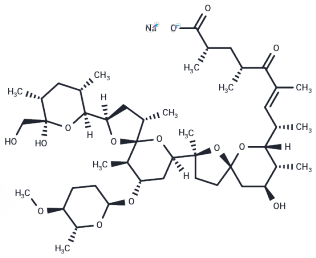
Data Sheet (Cat.No.T6601)

TargetMol

Nanchangmycin

Chemical Properties



CAS No. : 65101-87-3

Formula: C47H77NaO14

Molecular Weight: 889.1

Storage: Store at low temperature
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Nanchangmycin (Nanchangmycin A), a polyether antibiotic, is similar to the structure of dianemycin. It is very potent against the broad spectrum of harmful nematodes and insects but not for mammals and plants.
Targets(IC50)	Anti-infection,Antibacterial,Antibiotic
In vitro	Nanchangmycin resists gram-positive bacteria.
In vivo	Nanchangmycin, a growth promoter in poultry, cures coccidiosis in chickens. Nanchangmycin, a bacterially-derived natural product, blocks ZIKV and DENV infection potently in diverse cell types.
Kinase Assay	Histone deacetylase activity:For PCI-34051 characterization, measurements are performed in a reaction volume of 100 µL using 96-well assay plates in a fluorescence plate reader. For each isozyme. The HDAC protein in reaction buffer (50 mM HEPES, 100 mM KCl, 0.001% Tween-20, 5% dimethyl sulfoxide, pH7.4, supplemented with bovine serum albumin at concentrations of 0-0.05%) is mixed with PCI-34051 at various concentrations and allowed to incubate for 15 min. Trypsin is added to a final concentration of 50 nM, and acetyl-Gly-Ala-(N-acetyl-Lys)-amino-4-methyl coumarin is added to a final concentration of 25-100 µM to initiate the reaction. After a 30 min lag time, the fluorescence is measured over a 30 min time frame using an excitation wavelength of 335 nm and a detection wavelength of 460 nm. The increase in fluorescence with time is used as the measure of the reaction rate.
Cell Research	5×10E3 U2OS cells were plated in 25ul media per well in 384-well plates and cultured for 24 hours. Add 50 nl of Nanchangmycin, which is 0.7uM dissolved in 0.2% DMSO, to each well incubating for 1 hour.

Solubility Information

Solubility	H2O: < 1 mg/mL (insoluble or slightly soluble), DMSO: 88.9 mg/mL (99.99 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

In vivo Formulation	10% DMSO+90% Corn Oil: 3.3 mg/mL (3.71 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
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
50 mM	0.0225 mL	0.1125 mL	0.2249 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Liu T, et al. Chem Biol. 2008, 15(5), 449-458.