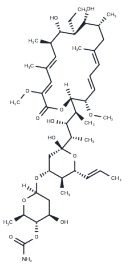
Data Sheet (Cat.No.T14995)

TargetMol

Concanamycin A (1 mg/ml solution in acetonitrile)

Chemical Properties



CAS No. : 80890-47-7

Formula: C46H75NO14

Molecular Weight: 866.09

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	Concanamycin A (Folimycin), a polycyclic lactone antibiotic, is a selective inhibitor of vacuolar H+-ATPase (V-ATPase) and lysosomal acidification, and can be used to study inflammation.Concanamycin A enhances the immune clearance of infected progenitor cells by cytotoxic T lymphocytes, and inhibits Nef et al. from different branches of HIV and simian immunodeficiency virus. Concanamycin A enhances immune clearance of cytotoxic T lymphocytes from infected progenitor cells, inhibits the Nef allele from different branches of HIV and simian immunodeficiency virus, and can be used to study HIV infection.
Targets(IC50)	Proton pump,HIV Protease,Antibacterial,Antibiotic
In vitro	In CD8+ cytotoxic T lymphocytes (CTLs), Concanamycin A (100 nM; 0, 4, 8, 12, 16, 20 hours) induced rapid cell death instead of apoptosis at 20 hours, without observed nuclear condensation[2].
In vivo	In wild type mice, Concanamycin A (15 mg/kg; intravenous injection at 0, 10, or 24 hours prior to sacrifice) resulted in significant liver injury, as demonstrated by increased serum transaminase levels, inflammatory cell infiltrate, hepatocyte apoptosis, and elevated expression of several cytokines including interleukin 4 (IL4) and interferon gamma (IFNγ) at 10 and 24 hours following administration[5].

Solubility Information

Solubility	DMSO: 8 mg/mL (9.24 mM),Sonication is recommended. Methanol: 8 mg/mL (9.24 mM),Sonication and heating are recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.1546 mL	5.7731 mL	11.5461 mL
5 mM	0.2309 mL	1.1546 mL	2.3092 mL
10 mM	0.1155 mL	0.5773 mL	1.1546 mL
50 mM	0.0231 mL	0.1155 mL	0.2309 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

Vaněk, Z., et al. Immunomodulators isolated from microorganisms. Folia Microbiol. 1991. 36:99–111.
Togashi K, et al. Concanamycin A, a vacuolar type H(+)-ATPase inhibitor, induces cell death in activated CD8(+) CTL. Cytotechnology. 1997 Nov;25(1-3):127-35.
Eswarappa SM, et al. Folimycin (concanamycin A) inhibits LPS-induced nitric oxide production and reduces surface localization of TLR4 in murine macrophages. Innate Immun. 2008 Feb;14(1):13-24.
Hines IN, et al. Impaired T cell-mediated hepatitis in peroxisome proliferator activated receptor alpha (PPARα)-deficient mice. Biol Res. 2018 Feb 15;51(1):5.
Woo JT, et al. Isolation, characterization and biological activities of concanamycins as inhibitors of lysosomal acidification. J Antibiot (Tokyo). 1992 Jul;45(7):1108-16.