Data Sheet (Cat.No.TP1072)



Valinomycin

Chemical Properties

CAS No.: 2001-95-8

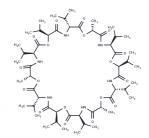
Formula: C54H90N6O18

Molecular Weight: 1111.32

Appearance: no data available

Storage: keep away from moisture

Powder: -20°C for 3 years | In solvent: -80°C for 1 year



Biological Description

Description	Valinomycin (NSC-122023) is a cyclic depsipeptide antibiotic and a potassium-specific ionophore. Valinomycin induces PINK1 activation and promotes Parkin phosphorylation at Ser65.
Targets(IC50)	Apoptosis,PTEN,Antibacterial,Antibiotic,Autophagy
In vivo	Valinomycin is irritating in contact with eyes and skin. Inhalation of Valinomycin can cause respiratory disturbances and even loss of consciousness. The median lethal dose (LD50) of Valinomycin in mice and rabbits was 2.5 mg/kg and 5 mg/kg, respectively. Valinomycin also has various chronic effects, including central and peripheral nervous system damage, eye damage, lens damage, and corneal damage [3].

Solubility Information

Solubility	Ethanol: 40 mg/mL (36 mM), Sonication is recommended.	
	DMSO: 20 mg/mL (18 mM), Sonication is recommended.	
	(< 1 mg/ml refers to the product slightly soluble or insoluble)	

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.8998 mL	4.4992 mL	8.9983 mL
5 mM	0.180 mL	0.8998 mL	1.7997 mL
10 mM	0.090 mL	0.4499 mL	0.8998 mL
50 mM	0.018 mL	0.090 mL	0.180 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.

Page 1 of 2 www.targetmol.com

Reference

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Li X, Li X, Xiang C, et al. Starvation-induced phosphorylation activates gasdermin A to initiate pyroptosis. Cell Reports. 2024, 43(9).

Abdalah R1, Wei L, Francis K, Yu SP. Valinomycin-induced apoptosis in Chinese hamster ovary cells. Neurosci Lett. 2006 Sep 11;405(1-2):68-73. Epub 2006 Jul 20.

Kroteń MA, Bartoszewicz M, Swiecicka I. Cereulide and valinomycin, two important natural dodecadepsipeptides with ionophoretic activities. Pol J Microbiol. 2010;59(1):3-10.

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Page 2 of 2 www.targetmol.com