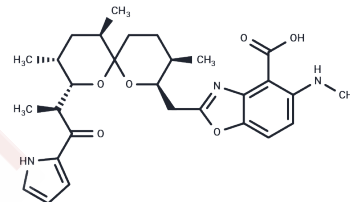


Calcimycin

Chemical Properties

CAS No. :	52665-69-7
Formula:	C ₂₉ H ₃₇ N ₃ O ₆
Molecular Weight:	523.62
Appearance:	no data available
Storage:	store at low temperature,keep away from direct sunlight,store under nitrogen
	Powder: -20°C for 3 years In solvent: -80°C for 1 year



Biological Description

Description	Calcimycin (A-23187) is an ionophorous, polyether carboxylic antibiotic from <i>Streptomyces chartreusensis</i> . It binds and transports calcium and other divalent cations across membranes, uncouples oxidative phosphorylation, and inhibits ATPase of rat liver mitochondria. The substance is primarily used as a biochemical tool to study the role of divalent cations in various biological systems.
Targets(IC ₅₀)	Apoptosis,Antibacterial,Antibiotic,Autophagy,Antifungal
In vitro	Calcimycin mediates mycobacterial killing by inducing intracellular calcium-regulated autophagy in a P2RX7 dependent manner [4].
In vivo	Calcimycin (2.5 or 7.5 nM; intrapleurally) induces protein leakage [5].

Solubility Information

Solubility	DMSO: 47 mg/mL (89.76 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.9098 mL	9.5489 mL	19.0978 mL
5 mM	0.382 mL	1.9098 mL	3.8196 mL
10 mM	0.191 mL	0.9549 mL	1.9098 mL
50 mM	0.0382 mL	0.191 mL	0.382 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.

Reference

- Wu Q, et al. Characterization of the biosynthesis gene cluster for the pyrrole polyether antibiotic calcimycin (A23187) in *Streptomyces chartreusis* NRRL 3882. *Antimicrob Agents Chemother*. 2011 Mar;55(3):974-82.
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- Engedal N, et al. Modulation of intracellular calcium homeostasis blocks autophagosome formation. *Autophagy*. 2013 Oct;9(10):1475-90.
- Mawatwal S, et al. Calcimycin mediates mycobacterial killing by inducing intracellular calcium-regulated autophagy in a P2RX7 dependent manner. *Biochim Biophys Acta Gen Subj*. 2017 Dec;1861(12):3190-3200.
- Wang JP, et al. Effect of norathyriol, isolated from *Tripterospermum lanceolatum*, on A23187-induced pleurisy and analgesia in mice. *Naunyn Schmiedeberg's Arch Pharmacol*. 1994 Jul;350(1):90-5.

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