

Chemical Properties

Description	Calcimycin is an ionophorous, polyether carboxylic antibiotic from <i>Streptomyces chartreusensis</i> . It binds and transports calcium and other divalent cations across membranes and uncouples oxidative phosphorylation while inhibiting ATPase of rat liver mitochondria. The substance is used mostly as a biochemical tool to study the role of divalent cations in various biological systems.
Targets(IC ₅₀)	Others: None
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	DMSO: 47 mg/mL (89.76mM) (< 1 mg/ml refers to the product slightly soluble or insoluble)
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	1mg	5mg	10mg
1 mM	1.91 mL	9.549 mL	19.098 mL
5 mM	0.382 mL	1.91 mL	3.82 mL
10 mM	0.191 mL	0.955 mL	1.91 mL
50 mM	0.038 mL	0.191 mL	0.382 mL

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Reference

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2. Elliott JI, et al. IKCa1 activity is required for cell shrinkage, phosphatidylserine translocation and death in Tlymphocyte apoptosis. *EMBO Rep*. 2003 Feb;4(2):189-94.
3. Engedal N, et al. Modulation of intracellular calcium homeostasis blocks autophagosome formation. *Autophagy*. 2013 Oct;9(10):1475-90.
4. 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.
5. Wang JP, et al. Effect of norathyriol, isolated from *Tripterospermum lanceolatum*, on A23187-induced pleurisy and analgesia in mice. *Naunyn Schmiedebergs Arch Pharmacol*. 1994 Jul;350(1):90-5.

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