



SZABO SCANDIC

Part of Europa Biosite

Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!



Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

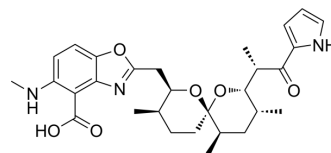
mail@szabo-scandic.com

www.szabo-scandic.com

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

Calcimycin

Cat. No.:	HY-N6687
CAS No.:	52665-69-7
Molecular Formula:	C ₂₉ H ₃₇ N ₃ O ₆
Molecular Weight:	523.62
Target:	Apoptosis; Autophagy; Bacterial; Fungal; Antibiotic; Oxidative Phosphorylation
Pathway:	Apoptosis; Autophagy; Anti-infection; Others
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 1 year; -20°C, 6 months (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 33.33 mg/mL (63.65 mM; Need ultrasonic)					
	Preparing Stock Solutions	Solvent Concentration	Mass	1 mg	5 mg	10 mg
		1 mM		1.9098 mL	9.5489 mL	19.0978 mL
		5 mM		0.3820 mL	1.9098 mL	3.8196 mL
		10 mM		0.1910 mL	0.9549 mL	1.9098 mL
Please refer to the solubility information to select the appropriate solvent.						
In Vivo	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (4.77 mM); Clear solution					
	2. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (4.77 mM); Clear solution					

BIOLOGICAL ACTIVITY

Description	Calcimycin (A-23187) is an antibiotic and a unique divalent cation ionophore (like calcium and magnesium). Calcimycin induces Ca ²⁺ -dependent cell death by increasing intracellular calcium concentration. Calcimycin inhibits the growth of Gram-positive bacteria and some fungi. Calcimycin also inhibits the activity of ATPase and uncouples oxidative phosphorylation (OXPHOS) of mammalian cells. Calcimycin induces apoptosis ^{[1][2][3][4]} .
In Vitro	Calcimycin (A-23187) mediates mycobacterial killing by inducing intracellular calcium-regulated autophagy in a P2RX7 dependent manner ^[4] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Calcimycin (A-23187) (2.5 or 7.5 nM; intrapleurally) induces protein leakage ^[5] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Mice (ICR, 25-30 g) ^[5]
Dosage:	2.5 or 7.5 nM
Administration:	Intrapleurally
Result:	Two hours after 2.5 nM, or three hours after 7.5 nM, challenge the protein levels in the pleural cavity were equivalent to about a half of their corresponding peak values.

CUSTOMER VALIDATION

- Cancer Commun (Lond). 2022 Nov 9.
- Mol Ther. 2022 Jul 21;S1525-0016(22)00435-X.
- EMBO Mol Med. 2021 Dec 7;13(12):e14072.
- Chemosphere. 2023 Oct 31;346:140532.
- Phytomedicine. 2023 Nov 15, 155200.

See more customer validations on www.MedChemExpress.com

REFERENCES

- [1]. 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.
- [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.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA