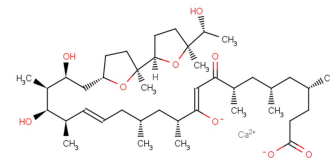


Ionomycin calcium

Chemical Properties

CAS No.:	56092-82-1
Formula:	C ₄₁ H ₇₀ CaO ₉
Molecular Weight:	747.07
Appearance:	N/A
Storage:	0-4°C for short term (days to weeks), or -20°C for long term (months).



Biological Description

Description	Ionomycin calcium is a potent, selective calcium ionophore and an antibiotic produced by <i>Streptomyces conglobatus</i> . also induces the activation of protein kinase C (PKC). Ionomycin calcium is highly specific for divalent cations (Ca>Mg>Sr=Ba). Ionomycin promotes apoptosis.
Targets(IC ₅₀)	Calcium ionophore: None
In vitro	Addition of 2 μM Ionomycin to LCLC 103H cells causes an instantaneous increase in intracellular Ca ²⁺ concentration from 50 to 180 nM. DNA and protein analysis in Ionomycin-treated cultures revealed DNA fragmentation and PARP cleavage to an 85-kDa fragment typical of caspase-mediated apoptosis. Necrosis could be detected in ~1-5% of the Ionomycin treated cells as supported by simultaneously positive fluorescein labeling and propidium iodide uptake. Caspase activation in whole cells was followed by monitoring the increase in activity against Ac-DEVD-amc following Ionomycin treatment.

Solubility Information

Solubility	DMSO: 10 mg/mL (13.39 mM) (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.339 mL	6.693 mL	13.386 mL
5 mM	0.268 mL	1.339 mL	2.677 mL
10 mM	0.134 mL	0.669 mL	1.339 mL
50 mM	0.027 mL	0.134 mL	0.268 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 °C for 6 months; - 20 °C for 1 month. Please use it as soon as possible.

Reference

- Liu C, et al. Characterization of ionomycin as a calcium ionophore. *J Biol Chem*. 1978 Sep 10;253(17):5892-4.
- Chatila T, et al. Mechanisms of T cell activation by the calcium ionophore ionomycin. *J Immunol*. 1989 Aug 15;143(4):1283-9.
- Gil-Parrado S, et al. Ionomycin-activated calpain triggers apoptosis. A probable role for Bcl-2 family members. *J Biol Chem*. 2002 Jul 26;277(30):27217-26.

Inhibitors · Natural Compounds · Compound Libraries

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