

Small Molecules

Ionomycin

Ca⁺⁺ ionophore

Catalog # 73722
73724

1 mg
5 mg



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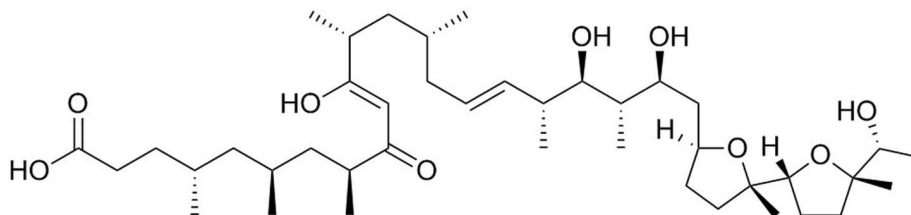
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Product Description

Ionomycin is a potent and selective calcium ionophore, derived from *Streptomyces conglobatus* (Liu et al.). It is used as a research tool to rapidly raise the intracellular level of calcium, and to study calcium transport across biological membranes by inducing the release of cytosolic calcium stores (Morgan & Jacob; Yoshida & Plant). Ionomycin is a more effective Ca⁺⁺ ionophore than A23187, but less effective at binding and carrying Mg⁺⁺ (Liu & Hermann). Ionomycin is able to activate and prime the polymorphonuclear neutrophil (PMN) oxidase (Elzi et al.), and is used in conjunction with phorbol 12-myristate 13-acetate (PMA) for the activation of T cells (IC₅₀ = 5.8 nM; Zhang et al.; Caraher et al.).

Molecular Name: Ionomycin
Alternative Names: SQ 23377
CAS Number: 56092-81-0
Chemical Formula: C₄₁H₇₂O₉
Molecular Weight: 709 g/mol
Purity: ≥ 98%
Chemical Name: Ionomycin free acid
Structure:



Properties

Physical Appearance: A solution in ethanol
Storage: Product stable at -20°C as supplied. Protect product from prolonged exposure to light. For product expiry date, please contact techsupport@stemcell.com.
Solubility: Not applicable.

Published Applications

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· Activates T cells from human, mouse, or rat sources, in combination with PMA, to express cytokines including IL-17, IL-4, IL-10, and IL-2 (Caraher et al.; Harrington et al.; Parrish-Novak et al.).

References

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- Liu C & Hermann TE. (1978) Characterization of ionomycin as a calcium ionophore. *J Biol Chem* 253(17): 5892–4.
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