



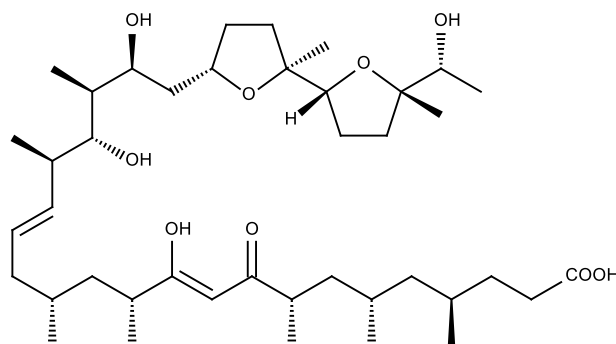
Catalog # 10-2079

Ionomycin

CAS# 56092-81-0

Fermentation product from *Streptomyces conglobatus*

Lot # X101220



Highly selective nonfluorescent calcium (Ca^{2+}) ionophore.¹ Induces a rapid rise in cytosolic Ca^{2+} in human neutrophils which is due to both release from cytosolic Ca^{2+} stores as well as Ca^{2+} influx.² It activates ($2\text{ }\mu\text{M}$) and primes ($20\text{--}200\text{ nM}$) neutrophil NADPH oxidase². Down regulates beta-catenin/Tcf signaling in a colon cancer cell line via suppressing the binding of Tcf to its specific DNA-binding site.³ In rat hepatoma cells, sub-lethal ionomycin activates the stress response by activating SAPK/JNK and HSF/HSE interaction leading to upregulation of HSP70 biosynthesis.⁴

- 1) Kaufmann et al., (1980) *Cation transport and specificity of ionomycin. Comparison with ionophore A23187 in rat liver mitochondria*; J. Biol. Chem. **255** 2735
- 2) Elzi et al., (2001) *Ionomycin causes activation of p38 and p42/44 mitogen-activated protein kinases in human neutrophils*; Am. J. Physiol. Cell Physiol. **281** C350
- 3) Partk et al., (2005) *Ionomycin downregulates beta-catenin/tcf signaling in colon cancer cell line*; Carcinogenesis, **26** 1929
- 4) Sreedhar and Srinivas (2002) *Activation of stress response by ionomycin in rat hepatoma cells*; J. Cell Biochem., **86** 154

PHYSICAL DATA

Molecular Weight: 709.01
Molecular Formula: $\text{C}_{41}\text{H}_{72}\text{O}_9$
Purity: >98% by TLC (20% CH_3OH in EtOAc)
NMR: (Conforms)
Solubility: DMSO (up to 10 mg/ml) or in Ethanol (up to 10 mg/mL)
Physical Description: Colorless oil or waxy solid. Vials may appear empty.
Storage and Stability: Store as supplied desiccated at -20°C for up to 1 year from the date of purchase. Solutions in DMSO or ethanol may be stored at -20°C for up to 3 months.

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