

CELUX® Ionomycin, Calcium Salt

Cat. no. MCCE024

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1. Product Information

Product name	CELUX® Ionomycin, Calcium Salt
Cat. No.	MCCE024
Size	1 mg
Storage and shipping	Transportation at room temperature. Powder: -20°C, freeze storage, valid for 2 years.

2. Product description

Ionomycin, a narrow-spectrum polyether antibiotic from *Streptomyces conglobatus*, is effective against gram-positive bacteria. It is commonly used as an effective calcium ion carrier, highly selective in binding calcium ions ($\text{Ca}^{2+} > \text{Mg}^{2+} > \text{Sr}^{2+} = \text{Ba}^{2+}$). It is a motile ion carrier that enhances calcium endocytosis by directly stimulating store-operated calcium entry across the biofilm. Ionomycin mobilizes intracellular calcium stores, increases intracellular calcium levels, and stimulates intracellular cytokine production. Therefore, it is often used as a tool for calcium-mediated intracellular signaling studies.

Ionomycin is often used in conjunction with PMA to stimulate cytokine production in cell signaling pathways, as well as with protein transport inhibitors, such as Monensin and Brefeldin A to study intracellular retention of cytokines.

This product is a calcium salt form of ionomycin for more stable storage. It is supplied as a powder and stable at -20°C for 2 years. It is also available as a storage solution in ethanol, stable at -20°C for 1 year.

3. Performance parameter

English Synonym	11, 19R,21S-trihydroxy-4R,6S,8S,12R, 14R,18R,20S-heptamethyl-22-[octahydro-5'S-[1R-hydroxy ethyl]-2S,5'-dimethyl[2,2'R-bifuran]-5Syl]-9-oxo-10Z, 16E-docosadienoic acid, calcium salt
CAS NO.	56092-82-1
Formula	$\text{C}_{41}\text{H}_{70}\text{O}_9\cdot\text{Ca}$
Molecular Weight	747. 1
Purity	≥ 98%
Solubility	Soluble in ethanol (20 mg/mL), DMSO (5 mg/mL), DMF (1.2 mg/mL)

4. Usage

Stock solution preparation: Add 268 μL DMSO to 1 mg of powder (Mw: 747.1 g/mol) to make a 5 mM stock solution.

[Note:] The stability of the powder is higher than that of the stock solution, so it is recommended to prepare the stock solution only before the first use.

Working solution system: can be directly diluted with pre-warmed medium or buffer to the desired working solution concentration, the commonly used effective concentration is: 1-10 μM .

5. Note

5.1 For your safety and health, please wear lab coat and disposable gloves to operate.

5.2 This product is for scientific research purposes only.

5.3 Centrifuge briefly before dissolving the powder to ensure that the product is all in the bottom of the tube.