

PRODUCT INFORMATION



Valinomycin

Item No. 10009152

CAS Registry No.: 2001-95-8
Formal Name: 3,6,9,15,18,21,27,30,33-nonaisopropyl-12,24,36-trimethyl-1,7,13,19,25,31-hexaaza-4,10,16,22,28,34-hexaazacyclohexatriacontane-2,5,8,11,14,17,20,23,26,29,32,35-dodecaone

Synonym: NSC 122023
MF: C₅₄H₉₀N₆O₁₈

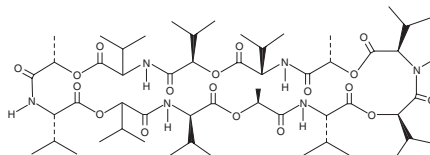
FW: 1,111.3

Purity: ≥95%

Supplied as: A crystalline solid

Storage: -20°C

Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Valinomycin is supplied as a crystalline solid. A stock solution may be made by dissolving the valinomycin in an organic solvent purged with an inert gas. Valinomycin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of valinomycin in these solvents is approximately 10, 5, and 30 mg/ml respectively.

If aqueous stock solutions are required for biological experiments, they can best be prepared by diluting the organic solvent into aqueous buffers or isotonic saline. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Description

Valinomycin is a cyclododecadepsipeptide potassium-selective ionophore antibiotic that is isolated from various strains of *Streptomyces*. The hydrophilic interior is the right size to accommodate the potassium ion, but not other ions, while the hydrophobic exterior allows the complex to pass through the lipid bilayer. Valinomycin induces apoptosis in several cell types, including CHO cells, by stimulating potassium efflux. Apoptotic events produced by valinomycin include phosphatidylserine membrane translocation, caspase-3 activation, and mitochondrial membrane depolarization.¹ Due to the ion-selective nature of valinomycin it is used in ion-selective electrodes.

Reference

1. Abdalah, R., Wei, L., Francis, K., *et al.* Valinomycin-induced apoptosis in Chinese hamster ovary cells. *Neurosci. Lett.* **405**(1-2), 68-73 (2006).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/13/2022

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD

ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM