Valinomycin

Product Number V 0627
Store at 2-8 °C

CAS RN: 2001-95-8
EG/EC 2178966

Synonyms: Cyclo(L-Val-D-HyIva-D-Val-L-Lac-)₃; Hylva =α-Hydroxyisovaleric acid, Lac = Lactic acid

MW: 1111.32
Molecular formula: C₅₄H₉₀N₆O₁₈

Product Description
Valinomycin is a cyclododecadepsi-peptide ionophore antibiotic.¹ It is a potassium ionophore that transports K⁺ across biological and artificial lipid membranes.²

Ion specificity: Rb⁺ >K⁺ >Cs⁺ >Ag⁺ >NH₄⁺ >Na⁺ .Li⁺ .³

Valinomycin can induce K⁺ conductivity in cell membranes, uncouples oxidative phosphorylation, induces apoptosis in murine thymocytes,⁴ and in pre-B cell.⁵ It inhibits NGF-induced neuronal differentiation⁶ and antagonizes ET-induced vasoconstriction.⁷,⁸

Precautions and Disclaimer
This product is for laboratory research use only. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions
The product is practically insoluble in water. Freely soluble in petrol ether, ether, benzene, chloroform, glacial acetic acid, butyl acetate, acetone. The product is also soluble in DMSO at 10 mg/ml.

Storage/Stability
Store the product desiccated at 2-8 °C. Under these conditions it is stable for 5 years. Solutions in DMSO are stable for few weeks, if stored at 2-8 °C, as verified by HPLC.

References

NDH/PHC 11/04