

## Product Information

### Valinomycin

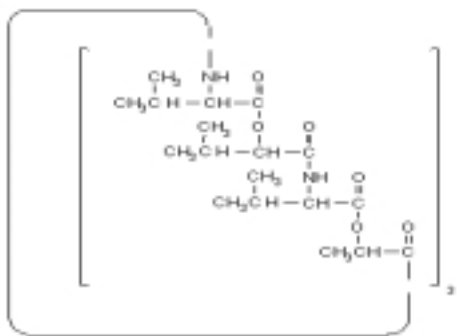
Product Number **V 0627**

Store at 2-8 °C

CAS RN: 2001-95-8

EG/EC 2178966

Synonyms: Cyclo(L-Val-D-Hylva-D-Val-L-Lac-)<sub>3</sub>:  
 Hylva = α-Hydroxyisovaleric acid, Lac = Lactic acid



MW: 1111.32

Molecular formula: C<sub>54</sub>H<sub>90</sub>N<sub>6</sub>O<sub>18</sub>

### Product Description

Valinomycin is a cyclododecadepsipeptide ionophore antibiotic.<sup>1</sup> It is a potassium ionophore that transports K<sup>+</sup> across biological and artificial lipid membranes.<sup>2</sup> Ion specificity: Rb<sup>+</sup> > K<sup>+</sup> > Cs<sup>+</sup> > Ag<sup>+</sup> > NH<sub>4</sub><sup>+</sup> > Na<sup>+</sup> . Li<sup>+</sup> .<sup>3</sup> Valinomycin can induce K<sup>+</sup> conductivity in cell membranes, uncouples oxidative phosphorylation, induces apoptosis in murine thymocytes,<sup>4</sup> and in pre-B cell.<sup>5</sup> It inhibits NGF-induced neuronal differentiation<sup>6</sup> and antagonizes ET-induced vasoconstriction. Useful in studies of K<sup>+</sup> transport in mitochondria.<sup>7,8</sup>

### 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

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4. Inai, Y., et al., Cell Struct. Funct., **22**, 555-563 (1967).
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6. Harada, H., et al., Biochim. Biophys. Acta., **1220**, 310-14 (1994).
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NDH/PHC 11/04

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