



# Valinomycin

# Data Sheet

**Catalog Number:** MC11056

**Product Type:** Small Molecule

**Bio-Activity:** Potassium ionophore

**CAS #:** 2001-95-8

**Research Categories:** Cell death, ubiquitin/proteasome, neuroscience

**Chemical Name:** Cyclo(L-Val-D-Hylva-D-Val-L-Lac-3)

**Solubility:** Soluble in DMSO (up to 10 mg/ml).

**Molecular Formula:** C54H90N6O18

**Purity:** > 98%

**Molecular Weight:** 1111.35

**Format:** Powder

**Ship Temp:** Ambient

**Storage:** -20°C

## Application Notes

### Description/Data:

Valinomycin is a selective K<sup>+</sup> ionophore capable of transporting potassium ions through lipid membranes [1]. It can induce apoptosis in cells by causing a rapid loss of mitochondrial membrane potential via potassium efflux [2,3].

### References:

- 1) Pressman, (1976) Biological applications of ionophores; *Annu.Rev.Biochem.* 45 501
- 2) Furlong et al., (1998) Induction of apoptosis by valinomycin: mitochondrial permeability transition causes intracellular acidification *Cell Death Diff.* 5 214
- 3) Inai et al. (1997) Valinomycin induces apoptosis of ascites hepatoma cells (AH-130) in relation to mitochondrial membrane potential; *Cell Struc.Funct.* 22 555

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