Product Information

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Alamethicin
from *Trichoderma viride*

Catalog Number **A4665**
Storage Temperature 2–8 °C

CAS RN 27061-78-5
Synonym: Antibiotic U-22324

Product Description

Alamethicin is a 20-amino acid channel-forming peptide antibiotic (~2 kDa) isolated from the fungus *Trichoderma viride*. It consists of several isoforms, for which structural information has been published.[1-5] This product is a mixture of alamethicin isoforms.

Alamethicin catalyzes the exchange of protons for monovalent cations with little difference in affinities[1,6] and has the ability to transport cations through biological and artificial lipid membranes. Its function is similar to Gramicidin A in that it forms pores or channels in the membrane in a voltage-dependent manner.[6] It also causes hemolysis of erythrocytes[1] and because it decreases the surface tension of water, it may have use as a detergent. A solution containing 100 µg/ml in deionized water has a surface tension of 41.6 dynes/cm at 25 °C as compared to 71.8 dynes/cm for deionized water and 52.7 dynes/cm for a 100 µg/ml solution of sodium lauryl sulfate.[7]

Alamethicin can be used for the permeabilization of mitochondria with no disruption of the outer and inner membranes.[8] Its incorporation into membranes was found to be associated with changes in lipid mobility.[9]

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

Alamethicin is soluble in ethanol at 100 mg/ml and in methanol at 20 mg/ml.

Storage/Stability

Store desiccated and protected from light at 2–8 °C. Under these conditions the product remains active for 3 years.

References

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