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# ProductInformation

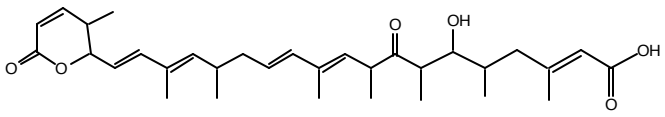
**Leptomycin A**
**from *Streptomyces sp***

Product Number **L6417**
Storage Temperature –20 °C

CAS RN 87081-36-5
Synonyms: 19-(3,6-Dihydro-3-methyl-6-oxo-2Hpyran-2-yl)-3,5,7,9,11,15,17-heptamethyl-6-hydroxy-8-oxo, 2,10,12,16,18-Nonadecapentaenoic acid; Jildamycin

## Product Description

Molecular Weight: 526.7
Molecular formula: $C_{32}H_{46}O_6$




Leptomycins are antifungal antibiotics with unique unsaturated, branched-chain fatty acid structures.[1] The physiochemical and biological properties of Leptomycins A and B are very similar.[2] Both are considered to be specific inhibitors of nuclear export. The suggested inhibition mechanism involves the direct binding of leptomycins to CRM1 (Exportin-1), which is the main nuclear export protein. This blocks the binding of CRM1 to proteins containing a nuclear export signal (NES),[3,4] and thus prevents their export from the nucleus. Although more research on nuclear export inhibition has been performed using Leptomycin B, it has been shown that Leptomycin A has similar effects and can induce, for example, nuclear accumulation of wild-type ERK5.[5]

Leptomycin A is also active against *Schizosaccharomyces pombe* and *Mucor rouxianus* with minimal inhibitory concentrations (MIC) of 0.1 and 0.4 µg/ml, respectively.[2]

## Components

Leptomycin A is supplied as a ~5 µg/ml solution in 70% methanol.

Purity: >95% (HPLC)

## 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.

## Storage/Stability

The product, as supplied, is stable for 2 years, if stored protected from light at –20 °C.

## References

1. Hamamoto, T., *et al*., J. Antibiot., **38**, 533-535 (1985).
2. Hamamoto, T., *et al*., J. Antibiot., **36**, 639-645 (1983).
3. Nishi, K., *et al*., J. Biol. Chem., **269**, 6320-6324 (1994).
4. Henderson, B.R., and Eleftheriou, A., Exp. Cell Res., **256**, 213-224 (2000).
5. Buschbeck, M., and Ullrich, A., J. Biol. Chem., **280**, 2659-2667 (2005).

KAA,SP,MAM 04/06-1