

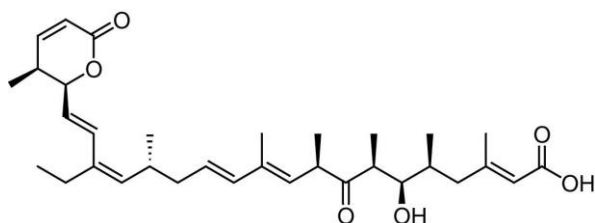
Product Information

Leptomycin B from *Streptomyces* sp.

Catalog Number **L2913**
Storage Temperature $-20\text{ }^{\circ}\text{C}$

CAS RN 87081-35-4

Product Description



Molecular formula: $\text{C}_{33}\text{H}_{48}\text{O}_6$
Molecular weight: 540.73

λ_{max} , (UV):¹ 225 nm ($\epsilon = 20,000$, ethanol)
shoulder at 240 nm ($\epsilon = 15,000$, ethanol)

Product Description

Leptomycin B is an unsaturated, branched-chain fatty acid and is an important tool in the study of nuclear export. It is a specific inhibitor of proteins containing nuclear export signal² with effective activity at nanomolar concentrations. Leptomycin B inhibits nucleo-cytoplasmic translocation of molecules such as the HIV-1 Rev protein and Rev-dependent export of mRNA.³ The addition of very low amounts of Leptomycin B to fibroblasts causes accumulation of MEK in the nucleus.⁴ Other proteins that are influenced by Leptomycin B are actin,⁵ c-Abl,⁶ cyclin B1,⁷ MDM2/p53,⁸ I κ B α ,⁹ MPF,¹⁰ and PKI.¹¹ The suggested inhibition mechanism involves the direct binding of Leptomycin B to CRM1 (exportin 1), which blocks the binding of CRM1 to proteins containing the nuclear export signal,^{12,13} via the interaction with a cysteine residue in the CRM1 central conserved region.¹⁴

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

The product is supplied as a solution in 70% (v/v) methanol, exact concentration is given on the Certificate of Analysis. Before use, tap gently to ensure the vial contents are located at the bottom of the vial. In order to prevent methanol evaporation, keep sample on ice and handle carefully.

Storage/Stability

Store protected from light at $-20\text{ }^{\circ}\text{C}$. Under these conditions, product is stable for 2 years.

References

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SM,DS,EM,NDH,PHC,MAM 12/19-1