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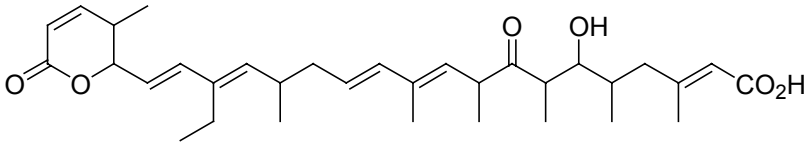
PRODUCT DATA SHEET

Leptomycin B

Code: **BIA-L1046**

Pack sizes: **0.5 mg, 2.5 mg**



Synonyms : **Elactocin, Antibiotic ATS 1287B, Antibiotic CI 940, Antibiotic CL 1957A, Antibiotic PD 114720, Mantuamycin**

Specifications

CAS #	:	**87081-35-4**
Molecular Formula	:	**$C_{33}H_{48}O_6$**
Molecular Weight	:	**540.7**
Source	:	***Streptomyces* sp. MST-AS4898**
Appearance	:	**Colourless Film**
Purity	:	**> 99% by HPLC**
Long Term Storage	:	**-20°C**
Solubility	:	**Soluble in ethanol or methanol. Ethanol recommended. Unstable in DMSO.**

Application Notes

Leptomycin B is the dominant and most studied member of the leptomycin class isolated from selected Streptomyces strains. Leptomycin B is a nanomolar active and specific nuclear export inhibitor. Its target is CRM1/exportin1, a protein in the nuclear export sequence (NES). Examples of proteins affected are c-Abl, cyclin B1, HIV-1 Rev, IκB, MPF, MAP/ERK, MDM2/p53, NF-κB/IκB7 and PKA. Export of many RNAs are also inhibited e.g. COX-2 and c-FOS mRNA. In addition Leptomycin B shows antifungal and antibacterial and potent antitumour activities.

References

1. Leptomycin B, an inhibitor of the nuclear export receptor CRM1, inhibits COX-2 expression. Jang B.C. et al. *J. Biol. Chem.* **2003**, 278, 2773.
2. Leptomycin B inhibition of signal-mediated nuclear export by direct binding to CRM1. Kudo N. et al. *Exp. Cell. Res.* **1998**, 242, 540.
3. Nuclear-cytoplasmic shuttling of C-ABL tyrosine kinase. Taagepera S. et al. *Proc. Natl. Acad. Sci. USA* **1998**, 95, 7457.
4. CRM1 is responsible for intracellular transport mediated by the nuclear export signal. Fukuda M. et al. *Nature* **1997**, 390, 308.

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