

Product Name: Leptomycin B

Product Number: L004

CAS Number: 87081-35-4

Molecular Formula: $C_{33}H_{48}O_6$

Molecular Weight: 540.7

Appearance: Colourless Film

Storage Conditions: -20°C

Description: 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). Proteins affected include c-Abl, cyclin B1, HIV-1 Rev, IκB, MPF, MAP/ERK, MDM2/p53, NF-κB/IκB7 and PKA. Leptomycin B inhibits export of many RNAs, e.g. COX-2 and c-FOS mRNA. Leptomycin B also shows antifungal, antibacterial and potent antitumor activities.

Leptomycin B is soluble in ethanol or methanol. Poor water solubility. Ethanol recommended. Unstable in DMSO.

References: 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.

Leptomycin B inhibition of signal-mediated nuclear export by direct binding to CRM1. Kudo N. et al. Exp. Cell. Res. 1998, 242, 540.

CRM1 is responsible for intracellular transport mediated by the nuclear export signal. Fukuda M. et al. Nature 1997, 390, 308.

Nuclear-cytoplasmic shuttling of C-ABL tyrosine kinase. Taagepera S. et al. Proc. Natl. Acad. Sci. USA 1998, 95, 7457.