Leptomycin B

50 µg

**Background:** Leptomycin B (LMB), originally discovered and utilized as a potent anti-fungal antibiotic from Streptomyces sp., has more recently been identified to inhibit nuclear export of proteins and RNA containing a Nuclear Export Sequence (NES) (1). The mechanism behind LMB's potent inhibition is achieved by specifically binding to chromosomal region maintenance (CRM)/exportin 1 protein; CRM1 binds to ribonuclear proteins containing the NES (1,2). LMB has also been reported to inhibit the degradation and subsequently lead to accumulation of p53 within the nucleus (3) and has demonstrated specific anti-tumor properties, although toxic, at high doses (1-3).

**Molecular Formula:** C33H48O6

**Molecular Weight:** 540.73

**Solubility:** Soluble and stable in ethanol. Leptomycin B is not stable in DMSO; do not dilute in DMSO.

**Purity:** 99%

**Storage:** Store solution at -20°C. Protect from light. If stored and handled appropriately, it will be stable for 12 months.

**Background References:**

**Directions for Use:** Leptomycin B is supplied as a 200 µM solution in ethanol within a sealed container. Please use a needle and syringe to remove the solution from the vial. All dilutions, except the final dilution, must be performed in ethanol. Final dilutions can be performed in culture media. Working concentrations and length of treatment can vary depending on the desired effect, but 1-20 nM for 3 hours generally inhibits most nuclear export. In order to minimize evaporation, it is recommended that the LMB vial be kept on ice when in use.