LKT Laboratories, Inc.

Mithramycin

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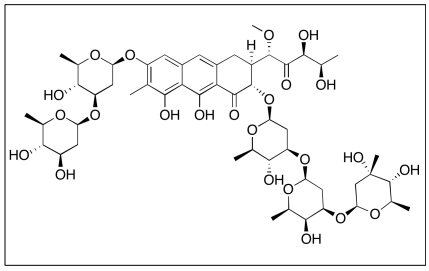
Product Information

Product ID M3476
CAS No. 18378-89-7
Chemical Name

Synonym Plicamycin, Mithramycin A



Formula $C_{52}H_{76}O_{25}$
Formula Wt. 1084.47
Melting Point 175-180°C
Purity ≥95%
Solubility DMSO (20 mg/ml), Methanol, Ethanol (10 mg/ml)

Bulk quanitites available upon request

Product ID	Size
M3476	1 mg
M3476	5 mg
M3476	10 mg

Store Temp 4°C
Ship Temp Ambient

Description Mithramycin is an aureolic acid-type polyketide antibiotic initially produced by species of *Streptomyces*. Mithramycin exhibits neuroprotective and anticancer chemotherapeutic activities. In animal models of Huntington's disease, mithramycin prevented increases in H3 histone methylation, delaying disease pathology, improving motor performance, and increasing survival rates. Mithramycin is a reversible inhibitor of RNA synthesis, binding CG and GC sequences and inhibiting transcription initiation. Mithramycin also inhibits CpG methylation of tumor-suppressor genes through direct inhibition of DNA methyltransferase 1 (DNMT1) activity in lung cancer cells. In cellular and animal models of prostate cancer, mithramycin increases levels of tBid and decreases levels of mTOR and Mcl-1, inducing apoptosis and inhibiting tumor growth.

References

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Choi ES, Jung JY, Lee JS, et al. Myeloid cell leukemia-1 is a key molecular target for mithramycin A-induced apoptosis in androgen-independent prostate cancer cells and a tumor xenograft animal model. Cancer Lett. 2013 Jan 1;328(1):65-72. PMID: 23000424.

Lin RK, Hsu CH, Wang YC. Mithramycin A inhibits DNA methyltransferase and metastasis potential of lung cancer cells. Anticancer Drugs. 2007 Nov;18(10):1157-64. PMID: 17893516.

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