

Product Name: Mithramycin A

Catalog No.: 1489

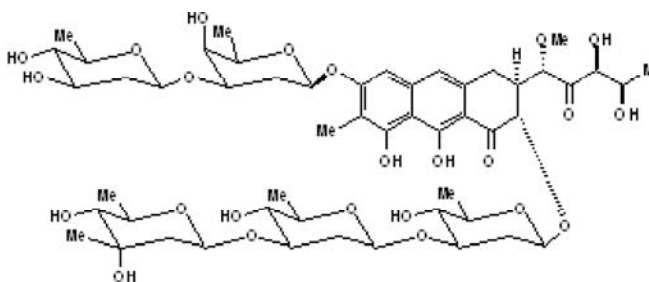
Batch No.: 8

CAS Number: 18378-89-7

IUPAC Name: (1S)-5-Deoxy-1-C-[(2S,3S)-7-[[2,6-dideoxy-3-O-(2,6-dideoxy-β-D-arabino-hexopyranosyl)-β-D-arabino-hexopyranosyl]oxy]-3-[(O-2,6-dideoxy-3-C-methyl-β-D-ribo-hexopyranosyl-(1.fwdarw.3)-O-2,6-dideoxy-β-D-lyxo-hexopyranosyl-(1.fwdarw.3)-2,6-dideoxy-β-D-arabino-hexopyranosyl]oxy]-1,2,3,4-tetrahydro-5,10-dihydroxy-6-methyl-4-oxo-2-anthracenyl]-1-O-methyl-D-threo-2-pentulose

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula:	C ₅₂ H ₇₆ O ₂₄
Batch Molecular Weight:	1085.16
Physical Appearance:	Yellow solid
Solubility:	DMSO to 50 mM
Storage:	Desiccate at -20°C
Batch Molecular Structure:	



2. ANALYTICAL DATA

Melting Point:	At 178°C
HPLC:	Shows 96.9% purity
Mass Spectrum:	Consistent with structure

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Anticancer antibiotic that selectively binds to G-C-rich DNA in the presence of Mg²⁺ or Zn²⁺, inhibiting RNA and DNA polymerase action. Inhibits c-myc expression and induces myeloid differentiation of HL-60 promyelocytic leukemia cells.

Physical and Chemical Properties:

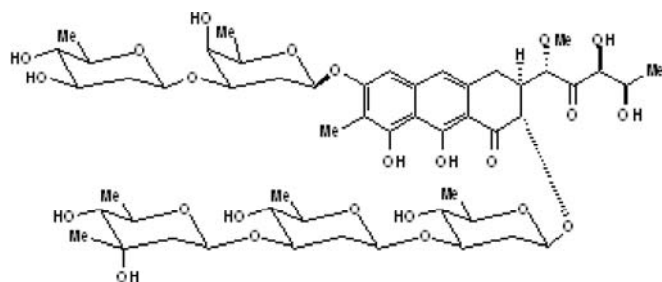
Batch Molecular Formula: C₅₂H₇₆O₂₄

Batch Molecular Weight: 1085.16

Physical Appearance: Yellow solid

Minimum Purity: >95%

Batch Molecular Structure:



Storage: Desiccate at -20°C

Solubility & Usage Info:

DMSO to 50 mM

This product is supplied as a lyophilized solid and may be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Demicheli and Garnier-Suillerot (1991) Mithramycin cannot bind to left-handed poly(dG-m5dC) in the presence of Mg²⁺ ion. *Biochem.Biophys.Res.Commun.* **177** 511. PMID: 1828342.

Ray et al (1990) Mithramycin selectively inhibits the transcriptional activity of a transfected human c-myc gene. *Am.J.Med.Sci.* **300** 203. PMID: 2147360.

Miller et al (1987) Mithramycin selectively inhibits transcription of G-C containing DNA. *Am.J.Med.Sci.* **294** 388. PMID: 2962490.

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