

**Product Name:** Mithramycin A

**Catalog No.:** 1489

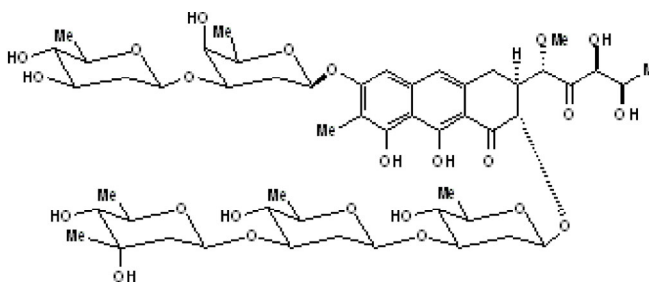
**Batch No.:** 10

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

<b>Batch Molecular Formula:</b>	C <sub>52</sub> H <sub>76</sub> O <sub>24</sub>
<b>Batch Molecular Weight:</b>	1085.16
<b>Physical Appearance:</b>	Yellow solid
<b>Solubility:</b>	DMSO to 50 mM
<b>Storage:</b>	Store at -20°C
<b>Batch Molecular Structure:</b>	



## 2. ANALYTICAL DATA

<b>HPLC:</b>	Shows 95.8% purity
<b>Mass Spectrum:</b>	Consistent with structure

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

**Product Name:** Mithramycin A

**Catalog No.:** 1489

**10**

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

**Description:**

Mithramycin A is an anticancer antibiotic that selectively binds to G-C-rich DNA in the presence of Mg<sup>2+</sup> or Zn<sup>2+</sup>, inhibiting RNA and DNA polymerase action. Inhibits c-myc expression and induces myeloid differentiation of HL-60 promyelocytic leukemia cells.

**Physical and Chemical Properties:**

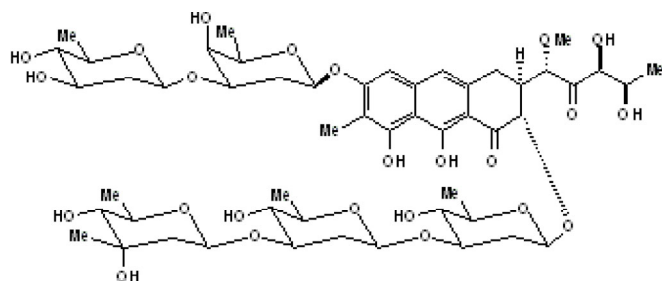
Batch Molecular Formula: C<sub>52</sub>H<sub>76</sub>O<sub>24</sub>

Batch Molecular Weight: 1085.16

Physical Appearance: Yellow solid

**Minimum Purity:** ≥95%

**Batch Molecular Structure:**



**References:**

**Demicheli and Garnier-Suillerot** (1991) Mithramycin cannot bind to left-handed poly(dG-m5dC) in the presence of Mg<sup>2+</sup> 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.

**Storage:** Store 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. \*Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

**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.

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

bio-techne.com

info@bio-techne.com

techsupport@bio-techne.com

North America

Tel: (800) 343 7475

China

info.cn@bio-techne.com

Tel: +86 (21) 52380373

Europe Middle East Africa

Tel: +44 (0)1235 529449

Rest of World

www.tocris.com/distributors

Tel:+1 612 379 2956