

Product Name:	Mithramycin A
Product Number:	M063
CAS Number:	18378-89-7
Molecular Formula:	$C_{52}H_{76}O_{24}$
Molecular Weight:	1085.2
Appearance:	Yellow powder
Storage Conditions:	-20°C
Description:	<p>Mithramycin A was the first of the aureolic acid class of antitumor antibiotics, isolated from <i>Streptomyces</i>.</p> <p>Mithramycin A is soluble in ethanol, methanol, DMF or DMSO. Limited water solubility.</p>
Mechanism of Action:	<p>Mithramycin inhibits transcription and protein synthesis by non-covalent binding with G-C-rich duplex DNA in the presence of magnesium and zinc ions. Mithramycin also induces differentiation of leukemic cells accompanied by an early decrease in c-myc expression, and selectively inhibits collagen-1 gene expression in human fibroblasts.</p>
References:	<p>Aureolic acid, a new antibiotic. I. Microbiological studies. Grundy W. E. et al. Antibiot. Chemother. 1953, 2, 1215.</p> <p>Aureolic acid group of anti-tumor antibiotics. Berlin Y. U. et al. Nature 1968, 218, 193.</p> <p>Mithramycin selectively inhibits the transcriptional activity of a transfected human c-myc gene Ray R. et al. Am. J. Med. Sci. 1990, 300, 203.</p> <p>Interaction of mithramycin with DNA. Evidence that mithramycin binds to DNA as a dimer in a right-handed screw conformation. Demicheli C. et al. Eur. J. Biochem. 1991, 198, 333.</p> <p>Mithramycin selectively inhibits collagen-alpha 1(I) gene expression in human fibroblast. Nehls M. C. et al. ; J. Clin. Invest. 1993, 92, 2916</p>