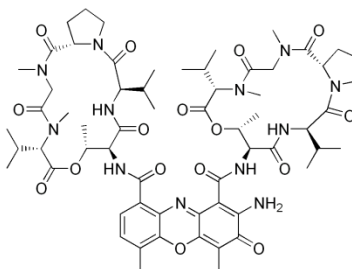


Catalog # 10-2054

Actinomycin D

CAS# 50-76-0

Lot # X102179



Actinomycin D (50-76-0) is a cyclopeptide antibiotic and intercalating transcription inhibitor with anti-neoplastic activity. Potent inhibitor of RNA polymerase.¹ Induces apoptosis in a variety of cancer cell lines^{2,3} via the intrinsic pathway⁴. Upregulates proapoptotic PUMA and downregulates Bcl-2 mRNA in peripheral blood lymphocytes.⁵.

1) Wagner *et al.* (2013) *RNA Polymerase II acts as an RNA-dependent RNA polymerase to extend and destabilize a non-coding RNA*; EMBO J. **32** 781

2) J. Kleeff *et al.* (2000) *Actinomycin D induces apoptosis and inhibits growth of pancreatic cancer cells*; Int. J. Cancer, **86** 399

3) Kasim *et al.* (2013) *Live fluorescence and transmission-through-dye microscopic study of actinomycin D-induced apoptosis and apoptotic volume decrease*; Apoptosis, **18** 521

4) Liu *et al.* (2016) *Actinomycin D enhances killing of cancer cells by immunotoxin RG7787 through activation of the extrinsic pathway of apoptosis*; Proc. Natl. Acad. Sci. USA, **113** 10666

5) Kalousec *et al.* (2007) *Actinomycin D upregulates proapoptotic protein Puma and downregulates Bcl-2 mRNA in normal peripheral blood lymphocytes*; Anticancer Drugs, **18** 763

PHYSICAL DATA

Molecular Weight:	1255.42
Molecular Formula:	C ₆₂ H ₈₆ N ₁₂ O ₁₆
Purity:	>98% HPLC
	NMR (Conforms)
Solubility:	DMSO (50 mg/ml)
Physical Description:	Orange-red solid
Storage and Stability:	Store as supplied at -20°C for up to 1 year from the date of purchase. Protect from exposure to air and light. Make solutions fresh daily.

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