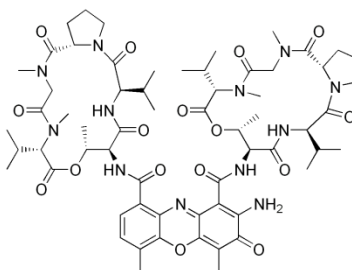


**Catalog # 10-2054**

**Actinomycin D**

CAS# 50-76-0

Lot # X102177



Actinomycin D (50-76-0) is a cyclopeptide antibiotic and intercalating transcription inhibitor with anti-neoplastic activity. Potent inhibitor of RNA polymerase.<sup>1</sup> Induces apoptosis in a variety of cancer cell lines<sup>2,3</sup> via the intrinsic pathway<sup>4</sup>. Upregulates proapoptotic PUMA and downregulates Bcl-2 mRNA in peripheral blood lymphocytes.<sup>5</sup>

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 <sub>62</sub> H <sub>86</sub> N <sub>12</sub> O <sub>16</sub>
Purity:	98%
Solubility:	DMSO (2 mg/ml); ethanol (up to 10 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.

**Materials provided by Focus Biomolecules are for laboratory research use only and are not intended for human or veterinary applications.**