Certificate of Analysis

Product Name: **Actinomycin D** **Catalog No.: 1229** **Batch No.: 13**

CAS Number: 50-76-0 EC Number: 200-063-6

IUPAC Name: 2-Amino-(*N*,*N*)-1-*bis*(hexadecahydro-6,13-diisopropyl-2,5,9-trimethyl-1,4,7,11,14-pentaoxo-1*H*-pyrrolo[2,1]-[1,4,7,10,13] oxatetraazacyclohexadecin-10-yl)-4,6-dimethyl-3-oxo-3*H*-phenoxazine-1,9-dicarboxamide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{62}H_{86}N_{12}O_{16}$

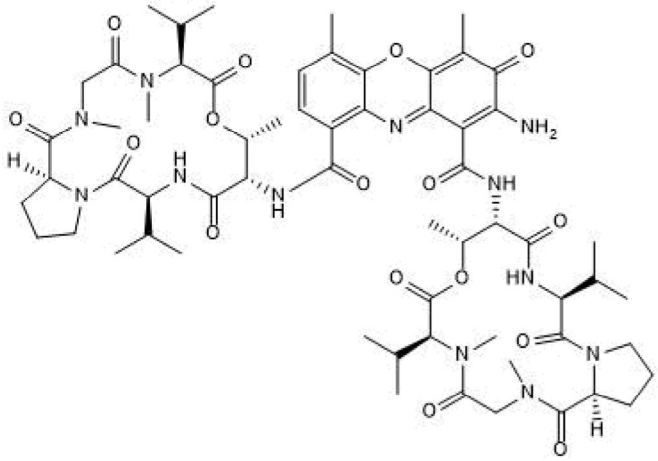
Batch Molecular Weight: 1255.43

Physical Appearance: Red solid

Solubility: DMSO to 50 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 95.7% purity

Mass Spectrum: Consistent with structure

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Description:

Actinomycin D is an anti-neoplastic antibiotic. Inhibits RNA polymerase and is a potent inducer of apoptosis.

Physical and Chemical Properties:

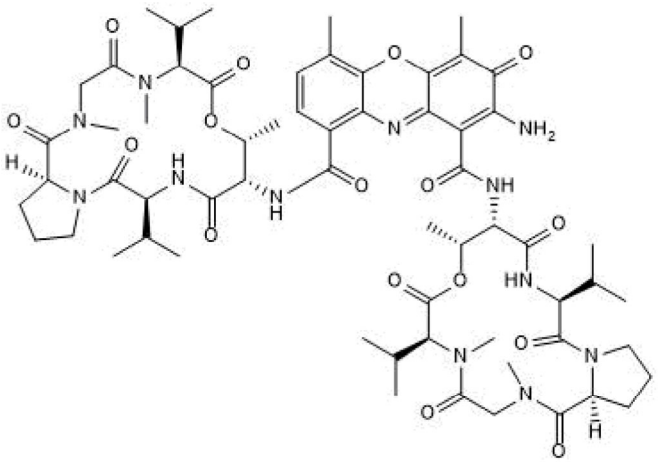
Batch Molecular Formula: $C_{62}H_{86}N_{12}O_{16}$

Batch Molecular Weight: 1255.43

Physical Appearance: Red solid

Minimum Purity: ≥95%

Batch Molecular Structure:



Storage: Store at -20°C

Solubility & Usage Info:

DMSO to 50 mM

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.

References:

Jeeninga *et al* (1998) The mechanism of actinomycin D-mediated inhibition of HIV-1 reverse transcription. Nucleic Acids Res. ***26*** 5472. PMID: 9826774.

Glynn *et al* (1992) Apoptosis induced by actinomycin D, camptothecin or aphidicolin can occur in all phases of the cell cycle. Biochem.Soc.Trans. ***20*** 84S. PMID: 1634006.

Aktipis *et al* (1981) A kinetic study on the mechanism of inhibition of RNA synthesis catalyzed by DNA-dependent RNA polymerase. Differences in inhibition by ethidium bromide, 3,8-diamino-6-ethylphenanthridinium bromide and actinomycin D. Biochim.Biophys.Acta ***655*** 278. PMID: 7025910.