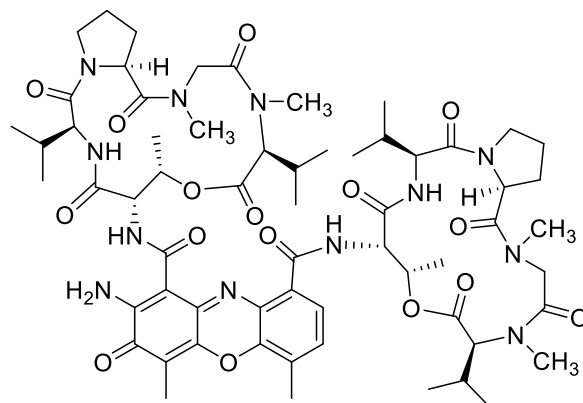


## Actinomycin D

Code No.: **BIA-A1185**

Pack sizes: **25 mg, 100 mg**



Synonyms : Dactinomycin, Actinomycin IV, Actinomycin Au3, Actinomycin B1, Actinomycin BiV, Actinomycin C1, Actinomycin DiV, Actinomycin Fo, Actinomycin I1, Actinomycin S2, Actinomycin X1, Auranthin A3, Auranthin C, NSC 3053, Chuoungwamycin B

## Specifications

CAS #	: <b>50-76-0</b>
Molecular Formula	: <b>C<sub>62</sub>H<sub>86</sub>N<sub>12</sub>O<sub>16</sub></b>
Molecular Weight	: <b>1255.4</b>
Source	: <b><i>Streptomyces</i> sp.</b>
Appearance	: <b>Orange solid</b>
Purity	: <b>&gt;95% by HPLC</b>
Long Term Storage	: <b>-20°C</b>
Solubility	: <b>Soluble in ethanol, methanol, DMF or DMSO. Limited water solubility.</b>

## Application Notes

Actinomycin D is the most studied member of a family of unique bicyclic depsipeptides produced by several *Streptomyces* species. The depsipeptides are linked by a heterocyclic benzoxazine "anchor" that gives the metabolites a highly distinctive red/orange colour. Actinomycin D exhibits potent antibiotic and antitumor activity via DNA intercalation leading to the inhibition of nucleic acid synthesis. Tumor cell death has been demonstrated to occur by apoptosis.

## References

1. Actinomycin. Part V. The structure of actinomycin D. Bullock E. J. Chem. Soc. 1957, 3280.
2. Apoptosis induced by actinomycin D, camptothecin or aphidicolin can occur in all phases of the cell cycle. Glynn J.M. et al., ; Biochem. Soc. Trans. 1992, 20, 84S.
3. Influence of DNA base sequence on the binding energetics of actinomycin D. Bailey S. A. et al., Biochemistry 1993, 32, 5881.