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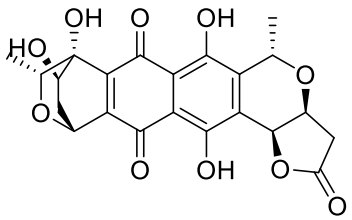
PRODUCT DATA SHEET

Granaticin A

Code No.: **BIA-G2979**

Pack sizes: **1 mg, 5 mg**



Synonyms : Granatomycin C, Litmomycin, N 9940A, WR 141, Antibiotic N 9940A, Antibiotic WR 141

Specifications

CAS #	:	**19879-06-2**
Molecular Formula	:	**$C_{22}H_{20}O_{10}$**
Molecular Weight	:	**444.4**
Source	:	***Streptomyces* sp.**
Appearance	:	**Red solid**
Purity	:	**>95% by HPLC**
Long Term Storage	:	**-20°C**
Solubility	:	**Soluble in methanol, DMSO.**

Application Notes

Granaticin A is a red benzoisochromanequinone pigment with antibiotic properties produced by Streptomyces vietnamensis. Granaticin is cytotoxic (ED50 3.2 µ/mL against human oral epidermoid carcinoma (KB) cells, inhibiting the maturation of ribosomal RNA. More recently, granaticin A's putative mode of action was identified as the oxidation of sulfhydryl groups of bacterial cellular components leading to cell death from H2O2 generated during the oxidation reaction.

References

1. Products of metabolism of actinomycetes. IX. Granaticin. Corbaz R. et al. Helvetica Chimica Acta 1957, 40, 1262.
2. Litmomycin, a new antibiotic. II. Fermentation, isolation, and properties of litmomycin. Soong P. et al. Taiwan Tangye Shiyanso Yanjiu Huibao 1964, 34, 105.
3. Mechanism of action of granaticin: inhibition of ribosomal RNA maturation and cell cycle specificity.
4. Heinstein P. J Pharm Sci. 1982, 71, 197.
5. Organocatalytic activity of granaticin and its involvement in bactericidal function. Nishiyama T. et al. Sci Rep. 2022, 12, 7046.

For in vitro laboratory use only. Not for human or animal use.

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