

# PRODUCT INFORMATION



## Aureothin

Item No. 19463

**CAS Registry No.:** 2825-00-5  
**Formal Name:** 2-methoxy-3,5-dimethyl-6-[(2R,4Z)-tetrahydro-4-[(2E)-2-methyl-3-(4-nitrophenyl)-2-propen-1-ylidene]-2-furanyl]-4H-pyran-4-one

**Synonyms:** Antibiotic 74A, BRN 0058476, JA 2814K, Mycolutein, Strain 58 substance

**MF:** C<sub>22</sub>H<sub>23</sub>NO<sub>6</sub>

**FW:** 397.4

**Purity:** ≥96%

**Supplied as:** A solid

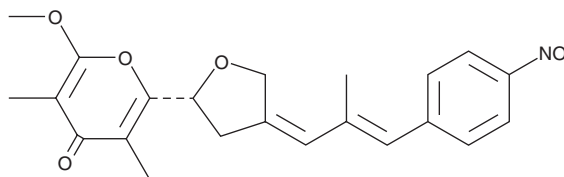
**Storage:** -20°C

**Stability:** ≥4 years

**Special Conditions:** Protect from light when in solution

**Item Origin:** Bacterium/*Streptomyces thioluteus*

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.



### Laboratory Procedures

Aureothin is supplied as a solid. A stock solution may be made by dissolving the aureothin in the solvent of choice, which should be purged with an inert gas. Aureothin is soluble in ethanol, DMSO, and dimethyl formamide.

### Description

Aureothin is a natural nitroaryl-substituted polyketide that exhibits antitumor, antifungal, and insecticidal activities.<sup>1,2</sup> It is a non-competitive inhibitor of NADH:ubiquinone oxidoreductase of bovine heart, *N. crassa*, and *E. coli* (IC<sub>50</sub>s = 0.07, 0.08, and 22 nmol/mg protein, respectively).<sup>3</sup>

### References

1. He, J. and Hertweck, C. Iteration as programmed event during polyketide assembly; molecular analysis of the aureothin biosynthesis gene cluster. *Chem. Biol.* **10**(12), 1225-1232 (2003).
2. Shao, Z. and Zhao, H. DNA assembler: A synthetic biology tool for characterizing and engineering natural product gene clusters. *Methods Enzymol.* **517**, 203-224 (2012).
3. Friedrich, T., Van Heek, P., Lief, H., *et al.* Two binding sites of inhibitors in NADH: Ubiquinone oxidoreductase (complex I). Relationship of one site with the ubiquinone-binding site of bacterial glucose:ubiquinone oxidoreductase. *Eur. J. Biochem.* **219**(1-2), 691-698 (1994).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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