

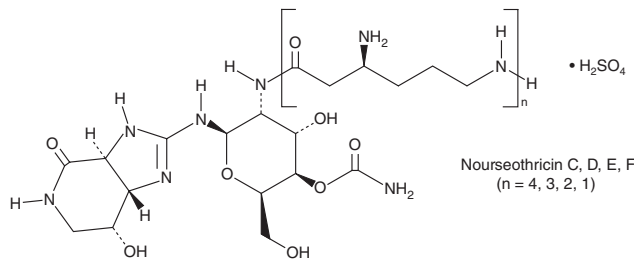
# PRODUCT INFORMATION



## Nourseothricin (sulfate)

Item No. 16227

**CAS Registry No.:** 96736-11-7  
**Formal Name:** nourseothricin, monosulfate  
**Synonyms:** clonNAT, Streptothricin  
**MF:**  $C_{31}H_{58}N_{12}O_{10} \cdot C_{19}H_{34}N_8O_8 \cdot H_2SO_4$   
**FW:** 1,359.5  
**Purity:**  $\geq 85\%$   
**Supplied as:** A crystalline solid  
**Storage:**  $-20^\circ\text{C}$   
**Stability:**  $\geq 4$  years



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

### Laboratory Procedures

Nourseothricin (sulfate) is supplied as a crystalline solid. Aqueous solutions of nourseothricin (sulfate) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of Nourseothricin (sulfate) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Nourseothricin is a broad-spectrum antibiotic produced by *Streptomyces* variants that inhibits protein synthesis by inducing miscoding. It is commonly used as a dominant selection antibiotic for genetically modified bacteria, yeasts, fungi, protozoa, plants, and mammalian cells.<sup>1,2</sup> Selection of recombinant strains is based on inactivation of nourseothricin by acetylation of the  $\beta$ -amino group of the  $\beta$ -lysine by nourseothricin N-acetyltransferase.<sup>3</sup>

### References

1. Shen, J., Guo, W., and Köhler, J.R. *CaNAT1*, a heterologous dominant selectable marker for transformation of *Candida albicans* and other pathogenic *Candida* species. *Infect. Immun.* **73**(2), 1239-1242 (2005).
2. Kochupurakkal, B.S. and Iglehart, J.D. Nourseothricin N-acetyl transferase: A positive selection marker for mammalian cells. *PLoS One* **8**(7), e68509 (2013).
3. Grammel, N., Pankevych, K., Demydchuk, J., et al. A  $\beta$ -lysine adenylating enzyme and a  $\beta$ -lysine binding protein involved in poly  $\beta$ -lysine chain assembly in nourseothricin synthesis in *Streptomyces noursei*. *Eur. J. Biochem.* **269**(1), 347-357 (2002).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

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