

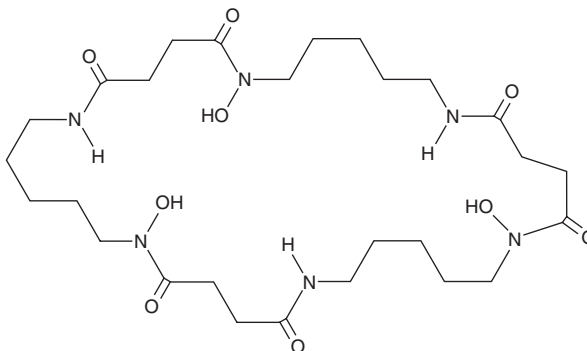
PRODUCT INFORMATION



Nocardamine

Item No. 28745

CAS Registry No.: 26605-16-3
Formal Name: 1,12,23-trihydroxy-1,6,12,17,23,28-hexaazacyclotritriacontane-2,5,13,16,24,27-hexone
Synonyms: Desferrioxamine E, Proferrioxamine E
MF: C₂₇H₄₈N₆O₉
FW: 600.7
Purity: ≥70%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Bacterium/*Streptomyces* sp.



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

Laboratory Procedures

Nocardamine is supplied as a solid. A stock solution may be made by dissolving the nocardamine in the solvent of choice, which should be purged with an inert gas. Nocardamine is soluble in organic solvents such as ethanol, methanol, DMSO, and dichloromethane.

Description

Nocardamine is a ferrioxamine siderophore that has been found in *Streptomyces* and has diverse biological activities.¹⁻⁴ It chelates iron in a chrome azurol S assay (IC₅₀ = 9.9 μM).¹ Nocardamine inhibits *M. smegmatis* and *M. bovis* biofilm formation (MIC = 10 μM for both), an effect that can be reversed by iron.² It is cytotoxic to T47D, SK-MEL-5, SK-MEL-28, and RPMI-7951 cancer cells (IC₅₀s = 6, 18, 12, and 14 μM, respectively).³ Nocardamine also induces morphological changes in BM-N4 insect cells.⁴

References

1. Lopez, J.A.V., Nogawa, T., Futamura, Y., *et al.* Nocardamin glucuronide, a new member of the ferrioxamine siderophores isolated from the ascamycin-producing strain *Streptomyces* sp. 80H647. *J. Antibiot. (Tokyo)* **72(12)**, 991-995 (2019).
2. Ishida, S., Arai, M., Niikawa, H., *et al.* Inhibitory effect of cyclic trihydroxamate siderophore, desferrioxamine E, on the biofilm formation of *Mycobacterium* species. *Biol. Pharm. Bull.* **34(6)**, 917-920 (2011).
3. Kalinovskaya, N.I., Romaneko, L.A., Irisawa, T., *et al.* Marine isolate *Citricoccus* sp. KMM 3890 as a source of a cyclic siderophore nocardamine with antitumor activity. *Microbiol. Res.* **166(8)**, 654-661 (2011).
4. Matsubara, K., Sakuda, S., Tanaka, M., *et al.* Morphological changes in insect BM-N4 cells induced by nocardamine. *Biosci. Biotechnol. Biochem.* **62(10)**, 2049-2051 (1998).

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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