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- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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PRODUCT INFORMATION



Enniatin B

Item No. 15382

CAS Registry No.: 917-13-5

Formal Name: cyclo[(2R)-2-hydroxy-3-methylbutanoyl-N-methyl-L-valyl-(2R)-2-hydroxy-3-methylbutanoyl-N-methyl-L-valyl-(2R)-2-hydroxy-3-methylbutanoyl-N-methyl-L-valyl]

Synonym: Antibiotic 86/88

MF: $C_{33}H_{57}N_3O_9$

FW: 639.8

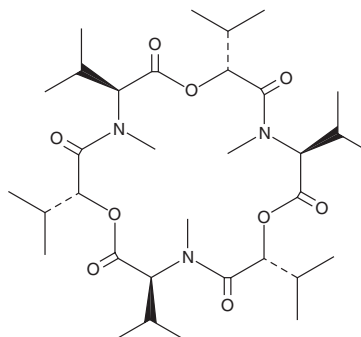
Purity: $\geq 95\%$

Supplied as: A powder

Storage: -20°C

Stability: ≥ 4 years

Item Origin: Bacterium/*Fusarium* sp.



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

Laboratory Procedures

Enniatin B is supplied as a powder. A stock solution may be made by dissolving the enniatin B in the solvent of choice, which should be purged with an inert gas. Enniatin B is soluble in organic solvents such as ethanol, methanol, DMSO, and dimethyl formamide.

Description

Enniatins are cyclichexadepsipeptides commonly isolated from fungi. Many act as ionophores, forming pores in cellular membranes to allow selective ion transport.¹ Enniatin B is a relatively poor ionophore with some capacity to facilitate import of K^+ and Na^+ across membranes.² It inhibits the pleiotropic drug resistance protein 5 (Pdr5p) in yeast.³ Through this mechanism enniatin B, at concentrations as low as $0.8 \mu\text{M}$, augments the ability of cerulenin (Item No. 10005647) or cycloheximide (Item No. 14126) to impair cell proliferation in cells overexpressing Pdr5p, an effect that is not observed in cells lacking Pdr5p.³ Like other enniatins, enniatin B inhibits acyl-CoA: cholesterol acyltransferase ($IC_{50} = 113 \mu\text{M}$), blocking cholesteryl ester formation.⁴ Enniatin B ($1 \mu\text{M}$) also increases caspase activity and induces apoptosis in H4IIE hepatoma cells and, when mixed with other enniatins, alters p53 signaling in human cancer cells.^{5,6}

References

1. Sy-Cordero, A.A., Pearce, C.J., and Oberlies, N.H. *J. Antibiot. (Tokyo)* **65(11)**, 541-549 (2012).
2. Kamyar, M.R., Rawnduzi, P., Studenik, C.R., et al. *Arch. Biochem. Biophys.* **429(2)**, 215-223 (2004).
3. Hiraga, K., Yamamoto, S., Fukuda, H., et al. *Biochem. Biophys. Res. Commun.* **328(4)**, 1119-1125 (2005).
4. Tomoda, H., Huang, X.H., Cao, J., et al. *J. Antibiot. (Tokyo)* **45(10)**, 1626-1632 (1992).
5. Wätjen, W., Debbab, A., Hohlfeld, A., et al. *Mol. Nutr. Food Res.* **53(4)**, 431-440 (2009).
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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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