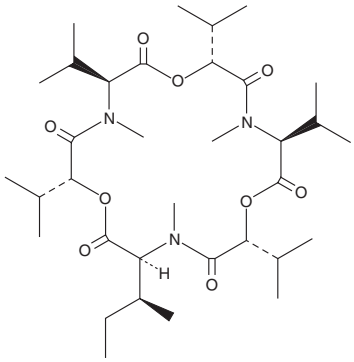
PRODUCT INFORMATION

Enniatin B1

Item No. 17245

CAS Registry No.:	19914-20-6
Formal Name:	cyclo[(2R)-2-hydroxy-3-methylbutanoyl-N-methyl-L-isoleucyl-(2R)-2-hydroxy-3-methylbutanoyl-N-methyl-L-valyl-(2R)-2-hydroxy-3-methylbutanoyl-N-methyl-L-valyl]
MF:	$C_{34}H_{59}N_3O_9$
FW:	653.9
Purity:	≥85%
Supplied as:	A powder
Storage:	-20°C
Stability:	≥4 years



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

Laboratory Procedures

Enniatin B1 is supplied as a powder. A stock solution may be made by dissolving the enniatin B1 in the solvent of choice, which should be purged with an inert gas. Enniatin B1 is soluble in organic solvents such as ethanol, methanol, DMSO, and dimethyl formamide.

Description

Enniatins are cyclohexadepsipeptides commonly isolated from fungi and are known to have antibiotic properties. Many act as ionophores, forming pores in cellular membranes to allow selective ion transport.[1,2] Enniatin B1 is one of four major analogs of the enniatin complex (Item No. 9002040). It has been shown to induce apoptosis in several cancer lines (EC_{50}s ≤ 10 µM) and to decrease the activation of the cell proliferation kinase, ERK (p44/p42).[3] Enniatin B1 also inhibits the multi-drug resistance transporter Pdr5p from *S. cerevisiae* and has been used to examine drug resistance mechanisms.[4]

References

1. Sy-Cordero, A.A., Pearce, C.J., and Oberlies, N.H. Revisiting the enniatins: A review of their isolation, biosynthesis, structure determination and biological activities. *J. Antibiot. (Tokyo)* **65(11)**, 541-549 (2012).
2. Kamyar, M.R., Rawnduzi, P., Studenik, C.R., *et al.* Investigation of the electrophysiological properties of enniatins. *Arch. Biochem. Biophys.* **429(2)**, 215-223 (2004).
3. Wätjen, W., Debbab, A., Hohlfeld, A., *et al.* Enniatins A1, B and B1 from an endophytic strain of *Fusarium tricinctum* induce apoptotic cell death in H4IIE hepatoma cells accompanied by inhibition of ERK phosphorylation. *Mol. Nutr. Food Res.* **53(4)**, 431-440 (2009).
4. Hiraga, K., Yamamoto, S., Fukuda, H., *et al.* Enniatin has a new function as an inhibitor of Pdr5p, one of the ABC transporters in *Saccharomyces cerevisiae*. *Biochem. Bioph. Res. Commun.* **328(4)**, 1119-1125 (2005).

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