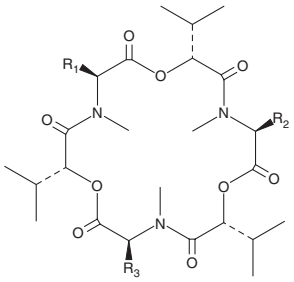
PRODUCT INFORMATION

Enniatin Complex

Item No. 9002040

CAS Registry No.: 11113-62-5
MF: $C_{33}H_{57}N_3O_9$ (for B)
FW: 639.8
Purity: ≥95%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Fungus/*Fusarium* sp.



	R_1	R_2	R_3
A:	s-Bu	s-Bu	s-Bu
A1:	i-Pr	s-Bu	s-Bu
B:	i-Pr	i-Pr	i-Pr
B1:	i-Pr	i-Pr	s-Bu
C:	i-Bu	i-Bu	i-Bu
D:	i-Pr	i-Pr	i-Bu
E:	i-Pr	s-Bu	i-Bu
F:	s-Bu	s-Bu	i-Bu

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

Laboratory Procedures

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

Description

Enniatin complex is a mixture of cyclohexadepsipeptides, commonly isolated from fungi, that act as ionophores, forming pores in cellular membranes to allow selective ion transport.[1,2] The complex typically contains the major components: A (Item No. 17456), A1 (Item No. 17457), B (Item No. 15382), and B1 (Item No. 17245) together with minor amounts of enniatin C, D, E, and F.[1] Enniatins exhibit antimicrobial activity against a variety of eukaryotic and prokaryotic genera, inhibit acyl-CoA:cholesterol acyltranferase, and induce apoptosis in several cancer lines.[1,3-6]

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. Tomoda, H., Huang, X.H., Cao, J., *et al*. Inhibition of acyl-CoA: Cholesterol acyltransferase activity by cyclodepsipeptide antibiotics. *J. Antibiot. (Tokyo)* **45(10)**, 1626-1632 (1992).
4. 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).
5. Dornetshuber, R., Heffeter, P., Kamyar, M.R., *et al*. Enniatin exerts p53-dependent cytostatic and p53-independent cytotoxic activities against human cancer cells. *Chem. Res. Toxicol.* **20(3)**, 465-473 (2007).
6. 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. Biophys. Res. Commun.* **328(4)**, 1119-1125 (2005).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM