

# PRODUCT INFORMATION



## Enniatin A1

Item No. 17457

**CAS Registry No.:** 4530-21-6  
**Formal Name:** cyclo[(2R)-2-hydroxy-3-methylbutanoyl-N-methyl-L-isoleucyl-(2R)-2-hydroxy-3-methylbutanoyl-N-methyl-L-isoleucyl-(2R)-2-hydroxy-3-methylbutanoyl-N-methyl-L-valyl]

**MF:** C<sub>35</sub>H<sub>61</sub>N<sub>3</sub>O<sub>9</sub>

**FW:** 667.9

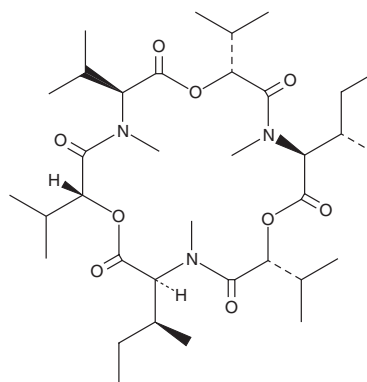
**Purity:** ≥99%

**Supplied as:** A powder

**Storage:** -20°C

**Stability:** ≥4 years

**Item Origin:** Fungus/*Fusarium* sp.



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

### Laboratory Procedures

Enniatin A1 is supplied as a powder. A stock solution may be made by dissolving the enniatin A1 in the solvent of choice, which should be purged with an inert gas. Enniatin A1 is soluble in organic solvents such as ethanol, methanol, DMSO, and dimethyl formamide.

### Description

Enniatins are cyclohexadepsipeptides commonly isolated from fungi that are known to have antibiotic properties and to induce apoptosis in several cancer lines.<sup>1</sup> Many function as ionophores, forming pores in cellular membranes to allow selective ion transport.<sup>1,2</sup> Enniatin A1 is one of four major analogs in the enniatin complex (Item No. 9002040). Its ionophoric activity has been described.<sup>2</sup> Additionally, enniatin A1 has been found to induce apoptosis in cancer cells (EC<sub>50</sub> = 5 μM in H4IIE rat hepatoma cells), decreasing the activation of the cell proliferation kinase, ERK (p44/p42) and inhibiting TNF-α-induced NF-κB activation.<sup>3</sup>

### 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).

#### 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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