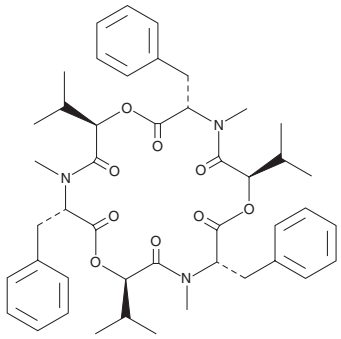
PRODUCT INFORMATION

Beauvericin

Item No. 11426

CAS Registry No.: 26048-05-5
Formal Name: cyclo[(2R)-2-hydroxy-3-methylbutanoyl-N-methyl-L-phenylalanyl-(2R)-2-hydroxy-3-methylbutanoyl-N-methyl-L-phenylalanyl-(2R)-2-hydroxy-3-methylbutanoyl-N-methyl-L-phenylalanyl]
MF: $C_{45}H_{57}N_3O_9$
FW: 784.0
Purity: ≥95%
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Beauvericin is supplied as a crystalline solid. A stock solution may be made by dissolving the beauvericin in the solvent of choice, which should be purged with an inert gas. Beauvericin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of beauvericin in these solvents is approximately 30 mg/ml.

Beauvericin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, beauvericin should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Beauvericin has a solubility of approximately 0.3 mg/ml in a 1:2 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Beauvericin is a mycotoxin originally derived from *B. bassiana*, a common fungal parasite of arthropods. It is also produced by the fungus *Fusarium*, a pathogen of insects and plants.[1] Beauvericin is cytotoxic against insect cells, killing the insect cell line SF-9 with a 50% cytotoxic concentration of 2.5 µM.[2] In mammalian cells, beauvericin induces apoptosis with an IC_{50} value of 4.5 µM.[1,3]

References

1. Logrieco, A., Moretti, A., Castella, G., *et al*. Beauvericin production by *Fusarium* species. *Appl. Environ. Microbiol.* **64(8)**, 3084-3088 (1998).
2. Calo, L., Fornelli, F., Nenna, S., *et al*. Beauvericin cytotoxicity to the invertebrate cell line SF-9. *J. Appl. Genet.* **44(4)**, 515-520 (2003).
3. Tonshin, A.A., Teplova, V.V., Andersson, M.A., *et al*. The *Fusarium* mycotoxins enniatins and beauvericin cause mitochondrial dysfunction by affecting the mitochondrial volume regulation, oxidative phosphorylation and ion homeostasis. *Toxicology* **276**, 49-57 (2010).

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