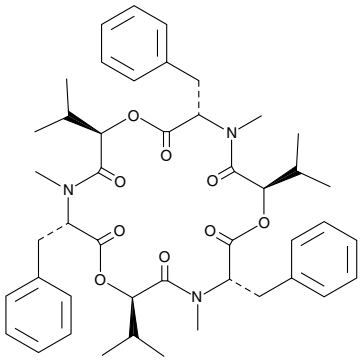
Product Information

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:	783.0
Purity:	≥95%
Stability:	≥2 years at -20°C
Supplied as:	A crystalline solid



Laboratory Procedures

For long term storage, we suggest that beauvericin be stored as supplied at -20°C. It should be stable for at least two years.

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

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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