

Product Data Sheet

Product Name: Apidaecin IA acetate

Cat. No.: GC79071

Chemical Properties

Cas. No.

Formula $C_{95}H_{150}N_{32}O_{23} \cdot xC_2H_4O_2$ M.Wt 2108.41

Solubility DMSO: 5 mg/mL (Need ultrasonic) Storage Sealed storage, away from moisture

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure

Gly-Asn-Asn-Arg-Pro-Val-Tyr-Ile-Pro-
Gln-Pro-Arg-Pro-Pro-His-Pro-Arg-Ile
(acetate salt)

Background

Apidaecin IA acetate is a basic peptide. Apidaecin IA acetate inhibits the enzymatic activity of DnaK. Apidaecin IA acetate induces bacterial cell death. Apidaecin IA acetate can be used in research

Caution: Product has not been fully validated for medical applications. For research use only.

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related to peritonitis and bacterial infections [1] [2].

In Vitro, Apidaecin IA (100 ng/mL; 8 h) acetate inhibits DnaK activity and binds LPS, reducing bacterial survival by approximately 2 log₁₀ at 8 h post-induction^[1]. Apidaecin IA (0.02-200 µg/mL) acetate potently inhibits the growth of a variety of Gram-negative bacterial strains, with its MIC values ranging from 0.02 µg/mL to 0.2 µg/mL^[2]. Apidaecin IA (100 µg/mL) acetate exhibits antibacterial activity against Escherichia coli NCTC 9001 cells. It inhibits the growth of the cells without causing immediate lysis, and does not interfere with the phospholipid bilayer^[2].

References:

- [1]. Krom RJ, et al. Engineered Phagemids for Nonlytic, Targeted Antibacterial Therapies. Nano letters. 2015 Jul 08;15(7):4808-13.
- [2]. Casteels P, et al. Apidaecins: antibacterial peptides from honeybees. The EMBO journal. 1989 Aug;8(8):2387-91.

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