BRING THIS TO YOUR DOCTOR · GREY PEPTIDES

Apidaecin

Also called: Apidaecin 1b; Apidaecin B; Apidaecins; Api137

What it is

Apidaecin is a short (~18 amino acid) proline- and arginine-rich antimicrobial peptide (PrAMP) from the honeybee (Apis mellifera), first described by Casteels et al. (1989). Unlike membrane-disrupting peptides it is non-lytic: bacteria import it and it binds the ribosome exit tunnel, trapping release factors and arresting ribosomes at stop codons to block translation termination (PMIDs 37603874, 38953159). It is mainly active against Gram-negative bacteria with low host toxicity, is widely engineered, and is used as a livestock feed additive. It is a research peptide, not an approved medicine, and has never been given to people as a treatment.

Approval status

Research Chemical. Not drugs: Drugs@FDA and the openFDA label endpoint hold no record, and FDA GSRS and ChEMBL hold no approved-drug record for apidaecin peptides (searched November 7, 2026). They are honeybee proline-rich antimicrobial peptides studied as non-lytic, ribosome-targeting antibacterial leads and as feed additives; there is no therapeutic development to market and no registered interventional trial of giving an apidaecin to people. Any feed-additive status is regulated separately from drug approval.

Dosing, as printed in the page's Recommended Dosing box

No established human dose

Apidaecins are honeybee research peptides; none has been given to people as a treatment. The work is in bacteria, cultured cells and animals (including livestock feed trials), often with synthetic analogs, at experimental amounts that do not carry over to people.

Educational information, not medical advice. None is a recommendation for you. An unapproved compound has no established safe or effective human dose, and products sold for "research use only" are not made or tested for people. Talk to a doctor before acting on anything on this site, including before you start, stop or change any medicine or dose.

Key human evidence

No human study is carded on the page; its 6 study cards are reviews, animal or cell work. The first 2:

• **Apidaecin B and temporin A against clinical blood-culture strains** (In Vitro, 2025). Apidaecin B and the frog peptide temporin A were tested against clinical bacterial strains isolated from blood cultures; apidaecin B was bactericidal against Escherichia coli and temporin A against staphylococci, supporting both as alternative antibacterial agents that warrant further optimisation of stability and delivery (an in-vitro study). **PMID 41623671**

• **Dietary apidaecin improves gut health and cuts Salmonella in laying hens** (Animal, 2026). Apidaecin added to the feed of laying hens improved intestinal structure, shifted the gut microbiota toward beneficial short-chain-fatty-acid-producing bacteria and raised gut immune markers; after a Salmonella Typhimurium challenge it reduced bacterial loads in the birds and on eggshells, and inhibited Salmonella adhesion to gut cells in vitro — a food-safety result. **PMID 41604325**

Interactions

A PubMed search for interaction studies of this compound with any drug (November 7, 2026, 3 records) found none in people. That is not evidence that it is safe to combine with anything.

Side effects and cautions

Reported side effects	Contraindications and cautions
• No human adverse-event data exist: no published study has administered an apidaecin to people • Unlike membrane-disrupting peptides, apidaecin is non-lytic and relatively non-toxic to host cells, which is a research advantage — but this is laboratory and animal data, not human safety data • Its spectrum is mainly Gram-negative and uptake-dependent, so activity can be lost if bacteria change their peptide transporters (a resistance route studied in the lab, PMID 38953159) • Material sold online as an 'apidaecin' is an unregulated research chemical of unverified content	• Not medicines: no FDA application or label, and no approval anywhere • No human dosing, interaction, pregnancy or long-term safety data exist for administered apidaecins • They are honeybee research antimicrobial peptides, not treatments • Any livestock feed-additive use is regulated separately from medicine and is outside this page's scope

Five questions to ask

1. Apidaecin is listed here as "Research Chemical". What does the evidence on this sheet mean for someone in my situation, and is there an approved treatment I should consider instead?
2. Here are the medicines and supplements I take. Do any of them interact with Apidaecin? This sheet records none published, which does not mean none exist.
3. Which side effects should make me stop and call you, for example no human adverse-event data exist: no published study has administered an apidaecin to people?
4. Do any of the cautions on this sheet apply to me, such as: Not medicines: no FDA application or label, and no approval anywhere?
5. What should we check before I start and while I am on it (blood tests, blood pressure, weight), and how often?

Grey Peptides is a vendor-neutral encyclopedia: it sells nothing and names no seller. This sheet is educational, not medical advice, and is not a prescription.