Drosocin

Also called: Drosocins

What it is

Drosocin is a 19-residue proline-rich antimicrobial peptide (PrAMP) from the fruit fly (Drosophila melanogaster), first described by Bulet et al. (1993) and O-glycosylated at threonine 11 — a sugar that increases its activity. Like apidaecin it is non-lytic: bacteria import it and it binds the ribosome, trapping release factor RF1 and arresting ribosomes at stop codons (a 'type II' PrAMP); it is mainly active against Gram-negative bacteria, not hemolytic, and also binds DnaK (PMIDs 36997647, 36997646). It is a research peptide, not an approved medicine, and has never been given to people as a treatment.

Approval status

Research Chemical. Not a drug: Drugs@FDA and the openFDA label endpoint hold no record, and FDA GSRS and ChEMBL hold no approved-drug record for drosocin (searched November 7, 2026). It is a Drosophila proline-rich antimicrobial peptide studied as a non-lytic, ribosome-targeting antibacterial lead and a model glycopeptide; there is no therapeutic development to market and no registered interventional trial of giving drosocin to people.

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

No established human dose

Drosocin is a fruit-fly research peptide; it has not been given to people as a treatment. The work is in bacteria, cultured cells and fruit-fly models, often with synthetic, glycosylated or engineered 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:

• **Drosocin and cecropin A kill blood-cell tumors in fruit flies** (Animal, 2025). In fruit-fly mutants that develop blood-cell (hematopoietic) tumors, drosocin and cecropin A produced by the fat body were taken up into tumour cells and triggered their death by apoptosis, depending on the innate-immune pathway and apparently targeting phosphatidylserine exposed on the tumour surface, without harming normal cells — suggesting antimicrobial peptides as low-side-effect anti-cancer leads (a fruit-fly study). **PMID 40136638**

• **Drosocin arrests ribosomes at stop codons (a type II PrAMP)** (In Vitro, 2023). Drosocin was shown to inhibit protein synthesis by arresting ribosomes at stop codons and sequestering class-1 release factors — the same non-lytic mechanism as apidaecin, making drosocin the second 'type II' PrAMP; yet a comprehensive mutant library showed drosocin grips the ribosome via residues spread throughout the peptide, unlike apidaecin's few key C-terminal residues (an in-vitro study). **PMID 36997647**

Interactions

A PubMed search for interaction studies of this compound with any drug (November 7, 2026, 0 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 drosocin to people • Unlike membrane-disrupting peptides, drosocin is non-lytic, not hemolytic and non-toxic to human cell lines in the lab (PMIDs 28656506, 24164265) — research findings, not human data • Its spectrum is mainly Gram-negative and uptake-dependent, so activity can be lost if bacteria change the transporters that import it • Material sold online as 'drosocin' is an unregulated research chemical of unverified content	• Not a medicine: no FDA application or label, and no approval anywhere • No human dosing, interaction, pregnancy or long-term safety data exist for administered drosocin • It is a fruit-fly research antimicrobial peptide, not a treatment • Its activity depends on bacterial uptake and glycosylation, features studied only in the laboratory

Five questions to ask

1. Drosocin 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 Drosocin? 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 drosocin to people?
4. Do any of the cautions on this sheet apply to me, such as: Not a medicine: 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?

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