BRING THIS TO YOUR DOCTOR · GREY PEPTIDES

Opiorphin

Also called: QRFSR; QRFSR peptide; Opiorphin QRFSR

What it is

Opiorphin is the human salivary pentapeptide Gln-Arg-Phe-Ser-Arg (QRFSR), discovered in 2006 (PMID 17101991). It is not an opioid — it inhibits the enzymes neprilysin and aminopeptidase N that destroy the body's enkephalins, so endogenous enkephalins persist and mu-/delta-opioid analgesia is amplified; in rats it was as effective as morphine. It is an endogenous research peptide (stable analog STR-324 studied preclinically), 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 opiorphin or its analog STR-324 (searched November 7, 2026). It is an endogenous human salivary peptide studied as an analgesic lead (an enkephalinase inhibitor); development has not reached an approved human treatment, and the human literature to date is observational biomarker work, not interventional trials.

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

No established human dose

Opiorphin is a peptide the body makes in saliva; it has never been given to people as a treatment. The analgesia work is in animals, where synthetic peptide or its stable analog is given by injection or infusion at experimental amounts that do not carry over to people, and the human studies only measure natural opiorphin levels.

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

The 2 human studies carded on the page (6 study cards in all):

• **Tear opiorphin rises with ocular pain (human observational)** (Human, 2020). In people with ocular pain from a corneal foreign body, tear opiorphin levels were significantly higher than in pain-free controls, consistent with opiorphin being released as a pain-relief response in the densely innervated cornea — an observational biomarker association, not a trial of giving opiorphin. **PMID 32482963**

• **Salivary opiorphin rises with acute dental pain (human observational)** (Human, 2025). In patients with acute pericoronitis, salivary opiorphin was significantly higher during painful disease than after the pain resolved following tooth extraction, supporting opiorphin as a potential salivary pain biomarker — an observational, correlational finding in a small sample, not an interventional study. **PMID 40214066**

Interactions

A PubMed search for interaction studies of this compound with any drug (November 7, 2026, 1 record) 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 opiorphin to people as a treatment • In animals its analgesia works through endogenous opioid pathways, so opioid-type effects (and the class concerns of tolerance/dependence) are a mechanistic consideration, though a goal of the approach is to reduce them versus direct opioids — an inference, not human data • Opiorphin genes promoted tumour growth, angiogenesis and a hypoxic-survival response in prostate-cancer models (PMID 33593085) — a laboratory safety signal worth weighing • Material sold online as 'opiorphin' 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 opiorphin • It is an endogenous research peptide, not a treatment • Laboratory links between opiorphin genes and cancer growth warrant caution about effects beyond pain

Five questions to ask

1. Opiorphin 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 Opiorphin? 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 opiorphin to people as a treatment?
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?

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.