BRING THIS TO YOUR DOCTOR · GREY PEPTIDES

Spinorphin

Also called: LVVYPWT; LVV-YPWT; Spinorphin LVVYPWT

What it is

Spinorphin is the endogenous heptapeptide Leu-Val-Val-Tyr-Pro-Trp-Thr (LVVYPWT), a hemoglobin-beta fragment isolated from bovine spinal cord (PMID 8230703). It inhibits enkephalin-degrading enzymes (especially dipeptidyl peptidase III), so it is antinociceptive; it is anti-inflammatory via the neutrophil fMLP receptor (PMID 9310346); and it is a potent, selective antagonist of the P2X3 pain receptor (PMID 17676725). It is an endogenous 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 drug record for spinorphin (searched November 7, 2026). It is an endogenous hemoglobin-derived peptide studied as an enkephalinase inhibitor, anti-inflammatory and P2X3 antagonist; development has not reached an approved human treatment and the evidence is cell, tissue and animal work.

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

No established human dose

Spinorphin is a peptide the body makes; it has never been given to people as a treatment. The work is in cells, tissue and animals, where synthetic peptide is applied 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:

• **Discovery: spinorphin, an enkephalinase-inhibitor peptide from spinal cord** (In Vitro, 1993). A potent inhibitor of enkephalin-degrading enzymes was isolated from bovine spinal cord and its sequence determined as the heptapeptide Leu-Val-Val-Tyr-Pro-Trp-Thr; it inhibited aminopeptidase, dipeptidyl aminopeptidase, angiotensin-converting enzyme and enkephalinase from brain while sparing those from kidney and blood, and was named spinorphin and proposed as a spinal-cord-derived neuromodulator (a discovery study). **PMID 8230703**

• **Spinorphin inhibits neutrophil activation by blocking the fMLP receptor** (In Vitro, 1997). In human neutrophils, spinorphin inhibited chemotaxis, superoxide generation and enzyme exocytosis triggered by the bacterial peptide fMLP; it did so by suppressing fMLP binding to its receptor (an effect angiotensin II and substance P did not share) and the resulting calcium signal, suggesting spinorphin is an endogenous inflammation-regulatory peptide (an in-vitro study). **PMID 9310346**

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 spinorphin to people • Its actions span opioid potentiation, anti-inflammatory and P2X3-blocking effects — broad biology that would need careful study, an inference, not human safety data • In rat hippocampus it blocked long-term potentiation at high stimulation frequencies (PMID 11226390), a reminder its effects on neural signalling are context-dependent • Material sold online as 'spinorphin' 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 spinorphin • It is an endogenous research peptide, not a treatment • Its multiple targets (enkephalinases, fMLP receptor, P2X3) warrant caution about broad effects in any use

Five questions to ask

1. Spinorphin 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 Spinorphin? 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 spinorphin 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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