TCAP-1 (Teneurin C-terminal Associated Peptide-1)

Also called: TCAP-1; Teneurin C-terminal associated peptide-1; Teneurin C-terminal associated peptide; PT00114

What it is

TCAP-1 (teneurin C-terminal associated peptide-1) is a 41-residue amidated peptide released from the C-terminal tip of teneurin-1, structurally related to corticotropin-releasing factor (CRF) and acting as a functional CRF antagonist via the teneurin receptor latrophilin (ADGRL) (PMID 30774623). In rodents it blocks CRF-driven limbic activation and reduces anxiety-like behaviour (PMIDs 19428634, 21411044) and attenuates restraint-stress corticosterone by non-invasive routes (PMID 39651597); in cells it regulates intracellular calcium as a CRF antagonist (PMID 36467544). It is a research peptide and early drug candidate (PT00114), not an approved medicine, with no registered clinical trial.

Approval status

Research Chemical. Not a drug: Drugs@FDA and the openFDA label endpoint hold no record, ClinicalTrials.gov holds no registered trial, and FDA GSRS and ChEMBL hold no substance record for TCAP-1 (searched November 6, 2026). It is a teneurin-derived peptide described as an early drug candidate (designated PT00114) for stress- and anxiety-related disorders by its clinical developer, Protagenic Therapeutics, but it is not approved and has no registered interventional trial; the published evidence is preclinical.

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

No established human dose

TCAP-1 is a teneurin-derived peptide that has not been given to people in any registered trial. The published work is in animals and cells, where TCAP-1 is given into the brain, under the skin or into the nose 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:

• **TCAP-1 attenuates restraint-stress corticosterone in mice and rats** (Animal, 2024). Subcutaneous TCAP-1 reduced the physiological stress response (corticosterone rise) to tube restraint in male mice and rats, and intranasal TCAP-1 given prophylactically likewise blunted the stress-induced corticosterone increase in male rats. The authors conclude that TCAP-1 delivered by non-invasive routes could have potential as a clinically relevant anxiolytic (a preclinical result). **PMID 39651597**

• **TCAP-1 reshapes hippocampal dendrites and reduces anxiety** (Animal, 2011). Ten days of TCAP-1 injection increased dendritic spine density in the CA1 and CA3 regions of the rat hippocampus (without changing the amygdala), reduced branching of CA3 basilar dendrites, and on the elevated-plus maze increased open-arm time and decreased closed-arm entries — a reduction in anxiety-like behaviour linked to remodelling of hippocampal neurons (a preclinical result). **PMID 21411044**

Interactions

A PubMed search for interaction studies of this compound with any drug (November 6, 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: there is no registered clinical trial of TCAP-1 • In animals it reduces stress-hormone and anxiety responses and reshapes hippocampal dendrites (PMIDs 39651597, 21411044) — preclinical signals, not a human safety profile • It is structurally related to CRF and binds the latrophilin receptor, so its effects on the stress axis and on neural wiring are the focus of ongoing study • Material sold online as 'TCAP-1' is an unregulated research chemical of unverified content	• Not a medicine: no FDA application or label, no approval anywhere, and no registered clinical trial • No human dosing, interaction, pregnancy or long-term safety data exist for administered TCAP-1 • It is a laboratory research peptide and early drug candidate, not a treatment • Its action on the stress axis and on neural connectivity warrants caution in any use

Five questions to ask

1. TCAP-1 (Teneurin C-terminal Associated Peptide-1) 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 TCAP-1 (Teneurin C-terminal Associated Peptide-1)? 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: there is no registered clinical trial of tcap-1?
4. Do any of the cautions on this sheet apply to me, such as: Not a medicine: no FDA application or label, no approval anywhere, and no registered clinical trial?
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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