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# Augurin (ECRG4)

**Also called:** Augurin; ECRG4; Esophageal cancer-related gene 4; C2orf40

## What it is

Augurin is the secreted peptide of the ECRG4 gene (esophageal cancer-related gene 4 / C2orf40, UniProt Q9H1Z8), processed with shorter peptides (CΔ16-augurin, ecilin, argilin). A conserved candidate tumor suppressor, it arrests the cell cycle (p53/p21), promotes apoptosis and lowers NF-kB to restrain glioma and esophageal cancer (PMIDs 20598162, 23957914) — though it is up-regulated and growth-promoting in papillary thyroid cancer (PMID 25326809). As a secreted signal it supports anti-glioma immunosurveillance via type-I interferon in microglia (PMID 28123880) and terminates wound healing in skin (PMID 22899245). 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 substance record for augurin / ECRG4 (searched November 6, 2026). It is an endogenous peptide; there is no therapeutic development of augurin itself, and no registered interventional trial of giving it to people. It is studied as a secreted tumor-suppressor peptide and immune/wound-related factor, which remains preclinical.

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

**No established human dose**

Augurin is an endogenous ECRG4-derived peptide that has never been given to people as a treatment. The human work measures the ECRG4 gene and peptide in tissue, and the functional work is in animals and cells.

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:

• **ECRG4 tissue distribution and its secreted peptides** (Review, 2015). A study and literature review mapping ECRG4 across rat organs, noting that the conserved tumor-suppressor gene encodes several processable, secreted peptides (augurin, CΔ16-augurin, ecilin, argilin). ECRG4 was found widely — muscle, digestive epithelium, lymphatic organs, neurons, and many endocrine cells (hypothalamus, pituitary, thyroid, adrenal, gonads) — and, being secreted and present in neurons and endocrine cells, was proposed to act as a neurotransmitter/neuromodulator and endocrine factor in addition to its oncosuppressor role (a review). **PMID 26150152**

• **Ecrg4 drives anti-glioma immunosurveillance via type-I interferon** (Animal, 2016). Glioma-initiating cells made from Ecrg4-knockout mouse neural stem cells formed tumors in the brains of immunocompetent mice, whereas Ecrg4-replete cells were usually cleared by host CD4, CD8 and NK responses. Ecrg4 fragments (residues 71-132 and 133-148) induced pro-inflammatory cytokines in microglia, and blocking type-I interferon signalling abolished the antitumor effect — identifying a major antitumor function of the Ecrg4 hormone-like peptide via type-I IFN (a preclinical result). **PMID 28123880**

## 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: no published study has administered augurin to people<br>• In animals and cells it restrains tumour-cell growth and supports anti-tumor immunity and wound termination (PMIDs 20598162, 28123880, 22899245) — preclinical signals, not a human safety profile<br>• Its effect is context-dependent — a tumor suppressor in most cancers but growth-promoting in papillary thyroid cancer (PMID 25326809)<br>• Material sold online as 'augurin' is an unregulated research chemical of unverified content | • Not a medicine: no FDA application or label, and no approval anywhere<br>• No human dosing, interaction, pregnancy or long-term safety data exist for administered augurin<br>• It is a laboratory research peptide, not a treatment<br>• Its context-dependent effect on cell growth (suppressing or promoting) warrants caution in any use |

## Five questions to ask

1. Augurin (ECRG4) 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 Augurin (ECRG4)? 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 augurin 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?

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.