Agouti-Related Peptide (AgRP)

Also called: AgRP; AGRP; Agouti-related protein; AgRP(83-132); ART

What it is

Agouti-related peptide (AgRP) is an endogenous neuropeptide from AgRP/NPY neurons of the hypothalamic arcuate nucleus that antagonises and inverse-agonises the melanocortin-3 and -4 receptors, opposing the satiety peptide alpha-MSH to drive hunger (PMID 34798121). Activating AgRP neurons in mice triggers voracious feeding (PMID 21364278); the neurons read ghrelin, leptin and insulin and act reciprocally with POMC neurons (PMID 38378998). It is a research peptide, not an approved medicine, and has never been given to people in a published trial; the receptor it blocks is the target of the approved drug setmelanotide.

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 agouti-related peptide (searched November 5, 2026). It is an endogenous protein with no therapeutic development and no registered interventional trial; its human literature is observational. The melanocortin-4 receptor it blocks is the target of the approved agonist setmelanotide.

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

No established human dose

Agouti-related peptide is an endogenous brain signal that has never been given to people as a treatment. The human study carded here only measured circulating AGRP in children with genetic obesity syndromes, not what happens when it is administered, and no regulator has approved any dose.

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 1 human study carded on the page (6 study cards in all):

• **Serum AGRP in genetic obesity syndromes** (Human, 2022). In children with Prader-Willi (12) or Bardet-Biedl (12) syndromes versus obese and lean controls, serum alpha-MSH was significantly lower and BDNF higher in the syndrome groups, consistent with a disrupted leptin-melanocortin pathway; serum AGRP did not differ from obese controls. An observational levels study bearing on the pathway AgRP works in, not a trial of giving AgRP. **PMID 35098494**

Interactions

A PubMed search for interaction studies of this compound with any drug (November 5, 2026, 29 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 AgRP to people • Human research measures its circulating levels only (PMID 35098494) • In animals it is a powerful orexigenic signal — brain infusion drives overeating and weight gain (PMID 21364278) • Material sold online as 'AgRP' 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 • It is a laboratory research peptide, not a treatment — and as a hunger signal it would be expected to increase, not reduce, body weight • Altered levels in disease are associations, not evidence that taking AgRP helps

Five questions to ask

1. Agouti-Related Peptide (AgRP) 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 Agouti-Related Peptide (AgRP)? 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 agrp 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.