

Sheep Growth Hormone Antagonist - Purified

Catalog No.: AR10440PU-S

Quantity: 0.1 mg

Background: GH is a member of the somatotropin/prolactin family of hormones which play an important role in growth control. The gene, along with four other related genes, is located at the growth hormone locus on chromosome 17 where they are interspersed in the same transcriptional orientation; an arrangement which is thought to have evolved by a series of gene duplications. The five genes share a remarkably high degree of sequence identity. Alternative splicing generates additional isoforms of each of the five growth hormones, leading to further diversity and potential for specialization. This particular family member is expressed in the pituitary but not in placental tissue as is the case for the other four genes in the growth hormone locus. Mutations in or deletions of the gene lead to growth hormone deficiency and short stature.

Species: Sheep

Source: *E. coli*

Format: **State:** Sterile Filtered White lyophilized (freeze-dried) powder.
Purity: >98.0% as determined by both RP-HPLC and SDS-PAGE analysis.
Purification Method: proprietary chromatographic techniques.
Buffer System: Lyophilized from a concentrated (1mg/ml) solution with 0.0045mM NaHCO₃
Reconstitution: Restore in 0.4% NaHCO₃ or water adjusted to pH 9, not less than 100 µg/ml, which can then be further diluted to other aqueous solutions, preferably in a presence of a carrier protein such as BSA or similar.

Description: Recombinant Ovine Growth Hormone Antagonist produced in *E. coli* is a single, non-glycosylated polypeptide chain containing 191 amino acids.

AA Sequence:

The sequence of the first five N-terminal amino acids was determined and was found to be *Ala-Thr-Phe-Pro-Ala*.

Biological Activity: GH G119R acts as antagonist using an in vitro bioassay in PDF-P1 3B9 cells stably transfected with Rabbit GH receptors.

It is capable of forming a 1:1 complex with the recombinant ovine growth hormone receptor extracellular domain (ECD) and binds to this ECD with affinity similar the the wild type oGH.

Molecular weight: 22 kDa

Storage: Prior to reconstitution store at 2-8°C for one month or desiccated below -18°C. Following reconstitution and filter sterilization store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid repeated freezing and thawing. Shelf life: one year from despatch.