

GH Ovine, Placental

Description: Placental Growth Hormone Ovine Recombinant produced in E.Coli is a single, non-glycosylated polypeptide chain containing 191 amino acids and having a molecular mass of 21918 Dalton. The GH Ovine Recombinant is purified by proprietary chromatographic techniques. Placental Growth Hormone differs from pituitary Ovine Growth Hormone by two amino acids G9R/G63S. Placental Ovine Growth Hormone possesses higher biological activity as compared to pituitary Ovine GH.

Synonyms: GH1, GH, GHN, GH-N, hGH-N, Pituitary growth hormone, Growth hormone 1, Somatotropin.

Source: Escherichia Coli.

Physical Appearance: Sterile Filtered White lyophilized (freeze-dried) powder.

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

Purity: Greater than 98.0% as determined by: (a) Analysis by SEC-HPLC. (b) Analysis by SDS-PAGE.

Formulation:

The protein was lyophilized from a concentrated (1mg/ml) solution with 0.0045mM NaHCO₃ adjusted to pH-9.

Stability:

Lyophilized Ovine Placental Growth Hormone although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution GH Ovine Placental should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Usage:

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

Solubility:

It is recommended to reconstitute the lyophilized Growth Hormone in sterile 0.4% NaHCO₃ pH-9 not less than 100

Introduction:

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.

Biological Activity:

Ovine placental Growth Hormone is fully biologically active when compared to World Health Organization (WHO) reference standard using in vitro bioassay in PDF-P1 3B9 cells stably transfected with rabbit GH receptors. It is also capable of forming a 1:2 complex with the recombinant ovine growth hormone receptor extracellular domain (ECD).

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