# Growth Hormone, placental, ovine recombinant

**Catalog No:** 08543
**Lot No:** XXXXX
**Source:** *E. coli*
**Synonyms:** GH1, GH, GHN, GH-N, hGH-N,Pituitary growth hormone, Growth hormone 1, Somatotropin

## Background

GH is a member of the somatotropin/prolactin family of hormones which play an important role in growth control. Its major role in stimulating body growth is to stimulate the liver and other tissues to secrete IGF-1. It stimulates both the differentiation and proliferation of myoblasts. It also stimulates amino acid uptake and protein synthesis in muscle and other tissues.

## 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. GH 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.

## Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

## Formulation

The protein was lyophilized from a concentrated (1 mg/ml) solution with 0.0045 mM $NaHCO_3$ adjusted to pH 9.

## Solubility

It is recommended to reconstitute the lyophilized GH in sterile 0.4% $NaHCO_3$ pH-9 not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

## Stability

Lyophilized placental Growth Hormone, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution GH 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.

## Purity

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

## 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.

## Activity

Ovine placental Grwoth 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).

**Usage**

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