

Recombinant Porcine Growth Hormone (rp GH)

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

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.

Description: Recombinant porcine Growth Hormone produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 190 amino acids and having a molecular mass of 21730 Dalton. Growth Hormone is purified by proprietary chromatographic techniques.

Source: *Escherichia Coli*.

Physical Appearance: Sterile filtered white lyophilized (freeze-dried) powder.

Formulation: Lyophilized after extensive dialyses against 0.34 mg sodium phosphate buffer (0.02 mg sodium phosphate monobasic & 0.32 mg sodium phosphate dibasic).
The samples of 10 µg contain Trehalose 5% (w/vol) for better recovery

Solubility: It is recommended to reconstitute the lyophilized GH in sterile H₂O not less than 100µg/ml which can then be further diluted to other aqueous solutions.

Stability: Lyophilized rp GH although stable at room temperature for 3 weeks, should be stored desiccated below -18° C . Upon reconstitution rp 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 RP-HPLC and by SDS-PAGE.

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

Biological Activity: rp GH contains 3 units/mg.

Protein content: Protein quantitation was carried out by two independent methods:

- 1.) UV spectroscopy at 280 nm using the absorbency value of 0.714 as the extinction coefficient for a 0.1% (1mg/ml) solution. This value is calculated by the PC GENE computer analysis program of protein sequences (IntelliGenetics).
- 2.) Analysis by RP-HPLC, using a calibrated solution of GH as a Reference Standard.

This material is offered for **research use only**. Not for use in human. For in vitro use only. ImmunoTools will not be held responsible for patent infringement or other violations that may occur with the use of our products.

<i>small</i>	100 µg	Cat.N°	16343666
<i>medium</i>	500 µg	Cat.N°	16343667

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