

# Recombinant Human Somatotropin/GH-N/GH1 Protein

Catalog No.: RP00033

Recombinant

## Sequence Information

Species	Gene ID	Swiss Prot
Human	2688	P01241

### Tags

C-His

### Synonyms

GH1; GH; GH-N; GHB5; GHN; IGHD1B;  
hGH-N; somatotropin;GH;GH-  
N;GHB5;GHN;IGHD1B;hGH-N

## Product Information

Source	Purification
<i>E. coli</i>	> 92% by SDS- PAGE.

### Endotoxin

< 0.1 EU/μg of the protein by LAL  
method.


### Formulation

Lyophilized from a 0.22 μm filtered  
solution of 20mM Tris, 150mM NaCl, pH  
8.0. Contact us for customized product  
form or formulation.

### Reconstitution

Centrifuge the vial before opening.  
Reconstitute to a concentration of  
0.1-0.5 mg/mL in sterile distilled water.  
Avoid vortex or vigorously pipetting the  
protein. For long term storage, it is  
recommended to add a carrier protein or  
stabilizer (e.g. 0.1% BSA, 5% HSA, 10%  
FBS or 5% Trehalose), and aliquot the  
reconstituted protein solution to  
minimize freeze-thaw cycles.

## Contact

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## Background

Growth hormone (GH), also known as somatotropin, is a member of a family of growth factors that includes prolactin, placental lactogens, proliferins, and somatotactin. It is synthesized primarily by somatotropes in the anterior pituitary and is stored in secretory granules. The pulsatile release of GH into circulation is regulated by the concerted actions of the hypothalamic hormones - GH-releasing hormone (GHRH) and somatostatin (SST) - as well as by signals from the periphery - ghrelin and leptin. Human GH is a pleiotropic cytokine that exerts its biological actions by binding to the transmembrane GH receptor, which is present in many cell types. GH stimulates the liver and other tissues to produce IGF-1, which regulates growth and metabolism. GH has also been shown to have direct effects on growth that is independent of IGF-1. GH, directly or indirectly via IGF-1, can act on B cells, T cells, NK cells, macrophages and neutrophils to exert immunomodulatory activities. In addition, GH can act directly on various cell types to induce lipolysis, lactation, amino acid uptake and protein synthesis.

## Basic Information

### Description

Recombinant Human Somatotropin/GH-N/GH1 Protein is produced by *E. coli* expression system. The target protein is expressed with sequence (Phe27-Phe217) of human GH (Accession #NP\_000506.2) fused with an initial Met at the N-terminus and a 6×His tag at the C-terminus.

### Bio-Activity

Measured by its binding ability in a functional ELISA. Immobilized Human GH1 at 2 μg/mL (100 μL/well) can bind Human GHR with a linear range of 0.1-19.4 ng/mL.

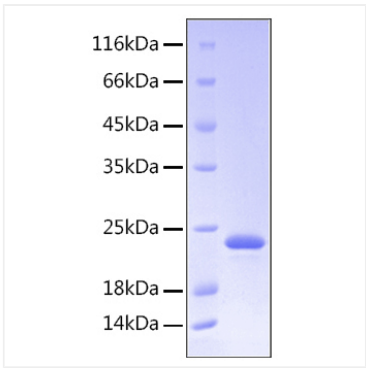
### Storage

Store the lyophilized protein at -20°C to -80 °C for long term.

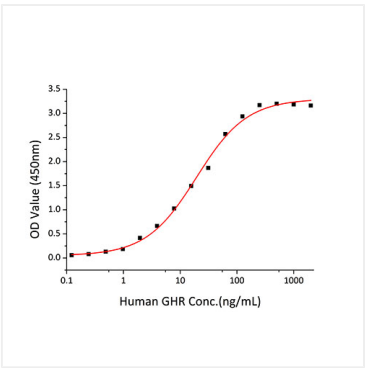
After reconstitution, the protein solution is stable at -20 °C for 3 months, at 2-8 °C for up to 1 week.

Avoid repeated freeze/thaw cycles.

## Validation Data



Recombinant Human Somatotropin/GH-N/GH1 Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 23 kDa.



Immobilized Human GH1 at 2  $\mu\text{g/mL}$  (100  $\mu\text{L/well}$ ) can bind Human GHR with a linear range of 0.1-19.4 ng/mL.