

Recombinant Human Growth Hormone (rh GH)

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

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 human GH produced in E.Coli is a single, non-glycosylated polypeptide chain containing 191 amino acids and having a molecular mass of 22 kDa. Rh GH is purified by proprietary chromatographic techniques.

Source: *Escherichia Coli*.

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

Formulation: Lyophilized from a 0.2µm filtered concentrated solution with 20mM PB, pH 7.0 and 3% Mannitol.

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

Stability: Lyophilized rh GH although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution it 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 RP-HPLC.
- (b) Analysis by SDS-PAGE.

Amino acid sequence: FPTIPLSRLF DNAMLRHRL HQLAFDITYQE FEEAYIPKEQ KYSFLQNPQT
SLCFSESIPT PSNREETQQK SNLELLRISL LLIQSWLEPV QFLRSVFANS LVIYASDSNV YDLLKDLEEG
IQTLMGRLED GSPRTGQIFK QTYSKFDTNS HNDDALLKNY GLLYCFRKDM DKVETFLRIV QCRSVEGSCG F.

Biological Activity: The ED₅₀ was determined by the proliferation assay of rat lymphoma NB2-11 cells and was found to be less than 0.1ng/ml, corresponding to a specific activity of > 1.0 × 10⁷ IU/mg.

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°	11343566
<i>medium</i>	500 µg	Cat.N°	11343567

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