

## **GH, Human**

**Cat. No.:** Z03012-10

**Size:** 10.0 ug

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

### **Description:**

Growth Hormone (GH) is a member of the somatotropin/prolactin family which play an important role in growth control. The human GH cDNA encodes a 217 amino acid (aa), and the first 26 aa is a signal peptide. By alternative splicing, at least four isoforms of GH have been identified. The major role of GH in stimulating body growth is to stimulate the liver and other tissues to secrete IGF-1. GH stimulates both the differentiation and proliferation of myoblasts, and also stimulates amino acid uptake and protein synthesis in muscle and other tissues.

Recombinant human Growth Hormone (rhGH) produced in *E. coli* is a single non-glycosylated polypeptide chain containing 191 amino acids. A fully biologically active molecule, rhGH has a molecular mass of 22.1 kDa analyzed by reducing SDS-PAGE and is obtained by proprietary chromatographic techniques at GenScript.

### **Amino Acid Sequence:**

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00001 FPTIPLSRLF DNAMLRAHRL HQLAFDITYQE FEEAYIPKEQ
00041 KYSFLQNPQT SLCFSESIPT PSNREETQKK SNLELLRISL
00081 LLIQSWLEPV QFLRSVFANS LVMGASDSNV YDLLKDLEEG
00121 IQTLMGRLED GSPRTGQIFK QTYSKFDTNS HNDDALLKNY
00161 GLLYCFRKM DKVETFLRIV QCRSVEGSCG F
```

**Source:** *E. coli*

**Species:** Human

**Biological Activity:** ED<sub>50</sub> < 0.5 ng/ml, measured by a cell proliferation assay using Nb2-11 Cells, corresponding to a specific activity of > 2.0 × 10<sup>6</sup> units/mg.

**Molecular Weight:** 22.1 kDa, observed by reducing SDS-PAGE.

**Formulation:** Lyophilized after extensive dialysis against PBS.

**Reconstitution:** Reconstituted in ddH<sub>2</sub>O at 100 µg/ml.

**Purity:** > 95% by SDS-PAGE and HPLC analyses.

**Endotoxin Level:** < 0.2 EU/µg, determined by LAL method.

**Storage:** Lyophilized recombinant human Growth Hormone (rhGH) remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution, rhGH should be stable up to 2 weeks at 4°C or up to 3 months at -20°C.