

GH, Human

Cat. No.: Z02791-100

Size: 100.0 ug

Synonyms: Growth Hormone (GH), Human;

Description:

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. The human GH cDNA encodes a 217 amino acid (aa) residue precursor protein with a 26 aa putative signal peptide. By alternative splicing, at least four isoforms of GH have been identified.

Amino Acid Sequence:

```
00001 FPTIPLSRLF DNAMLAHRL HQLAFDTYQE FEEAYIPKEQ
00041 KYSFLQNPQT SLCFSESIPT PSNREETQQK SNLELLRISL
00081 LLIQSWLEPV QFLRSVFANS LVYGASDSNV YDLLKDLEEG
00121 IQTLMGRLED GSPRTGQIFK QTYSKFDTNS HNDDALLKNY
00161 GLLYCFRKDM DKVETFLRIV QCRSVEGSCG F
```

Source: *E. coli*

Species: Human

Biological Activity: Fully biologically active when compared to standard. The ED₅₀ as determined by a cell proliferation assay using rat Nb2-11 lymphoma cells is less than 0.1 ng/ml, corresponding to a specific activity of > 1.0 × 10⁷ IU/mg.

Molecular Weight: Approximately 22 kDa, a single non-glycosylated polypeptide chain containing 191 amino acids

Formulation: Lyophilized from a 0.2 µm filtered concentrated solution with 5mM NaHCO₃, pH 7.0.

Appearance: Sterile Filtered White lyophilized (freeze-dried) powder.

Reconstitution: We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/ml. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.

Purity: > 98 % by SDS-PAGE and HPLC analyses.

Endotoxin Level: Less than 1 EU/µg of rHuGH as determined by LAL method.

Storage: This lyophilized preparation is stable at 2-8 °C, but should be kept at -20 °C for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8 °C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20 °C to -70 °C. Avoid repeated freeze/thaw cycles.