

## 32-20166: Animal-Free Recombinant Human Growth Hormone(Discontinued)

**Reactivity :** Rat

**Alternative Name :** Somatotropin, GH, GH-N, Growth Hormone 1, Pituitary growth hormone

### Description

**Source:** **E.coli** Growth Hormone (GH), also known as somatotropin, is a pleiotropic cytokine of the hematopoietic growth factor superfamily, which encompasses most cytokines, hematopoietic growth factors, and related receptors, and includes the related growth hormone receptor, prolactin, placental lactogens, proliferins, and somatolactin (SST). GH is primarily recognized for its anabolic role in stimulating the growth and differentiation of muscle, bone, and cartilage. A number of other functions, including immunomodulatory actions, are also attributed to GH, due in part to the pervasive distribution of its receptors, and the indirect effects associated with GH-stimulated production of insulin-like growth factors (IGFs). Occurring predominantly in the somatotropes of the anterior pituitary, whereupon it is stored in secretory granules, production of GH has also been noted in many other tissues, including those of the hematopoietic system. The production and pulsatile release of circulating GH is very tightly regulated by both negative and positive feedback regulations of pituitary and hypothalamic hormones, such as Pituitary-specific Positive Transcription Factor 1 (POU1F1), Growth Hormone Releasing Hormone (GHRH), and somatostatin (SRIF). Deficient production of GH is associated with dwarfism and reduction of lean body mass, while overproduction is associated with acromegaly and gigantism, as well as breast tumor growth. Recombinant Human Growth Hormone is a 22.1 kDa, single, non-glycosylated polypeptide chain containing 191 amino acid residues.

### Product Info

**Amount :** 10 µg / 50 µg

**Purification :** Purity:  $\geq 98\%$  by SDS-PAGE gel and HPLC analyses.

**Content :** This recombinant protein is supplied in lyophilized form.

**Amino Acid :** FPTIPLSRLF DNAMLRAHRL HQLAFDITYQE FEEAYIPKEQ KYSFLQNPQT SLCFSES IPT PSNREETQQK  
SNLELLRISL LLIQSWLEPV QFLRSVFANS LYGASDSNV YDLLKDLEEG IQTLMGRLED GSPRTGQIFK  
QTYSKFDTNS HNDDALLKNY GLLYCFRKDM DKVETFLRIV QCRSVEGSCG F

### Application Note

Determined by its ability to stimulate the proliferation of rat Nb2-11 cells. The expected  $ED_{50}$  is  $\leq 0.05$  ng/ml, corresponding to a specific activity of  $\geq 2 \times 10^7$  units/mg.