

TECHNICAL DATA SHEET

# Recombinant Human Growth Hormone (Carrier-free)

Catalog Number: 21-7147

**RPx-Pro™ Recombinant Protein**  
PRODUCT INFORMATION

**CONTENTS**

Recombinant Human Growth Hormone (Carrier-free)

**DESCRIPTION**

Growth Hormone (GH), also known as somatotropin, is a secreted protein that is best known for stimulating the growth and differentiation of bone, cartilage and muscle. It stimulates the production of IGF-1, involved in the regulation of growth and metabolism. GH also can act on B cells, T cells, NK cells, macrophages and neutrophils to exert immunomodulatory actions directly or indirectly through IGF-1. Its varied functions are associated with binding to its receptor, which is present on a wide array of cell types. GH is synthesized by somatotropes in the anterior pituitary and is stored in secretory granules. Release into circulation is tightly regulated by hypothalamic hormones and other signals.

**MOLECULAR MASS**

Recombinant Human Growth Hormone is a non-glycosylated polypeptide consisting of 192 amino acids and has a molecular weight of 22.3 kDa.

**AMINO ACID SEQUENCE**

MFPTIPLSRL FDNAMLRAHR LHQLAFDTYQ EFEEAYIPKE QKYSFLQNPQ TSLCFSESIP TPSNREETQQ KSNLELLRIS LLLIQSWLEP VQFLRSVFAN SLVYGASDSN VYDLLKDL EE GIQTLMGRLE DGSPRTGQIF KQTYSKFD TN SHNDDALLKN YGLLYCFR KD MDKVETFLRI VQCRSVEGSC GF

**SOURCE**

E. coli

**APPLICATIONS**

Bioassay

**PURITY**

98 %

**STORAGE**

-20°C

**PROTEIN CONTENT**

Verified by UV Spectroscopy and/or SDS-PAGE gel.

**ENDOTOXIN LEVEL**

Endotoxin level is <0.1 ng/µg of protein (<1 EU/µg).

**AUTHENTICITY**

Verified by N-terminal and Mass Spectrometry analyses (when applicable).

**CROSS REACTIVITY**

Rat

**BIOACTIVITY**

The expected ED<sub>50</sub> of ≤ 0.05 ng/ml is determined by its ability to stimulate the proliferation of Nb2-11 cells in rat, and corresponds to a specific activity of ≥ 2 x 10<sup>7</sup> units/mg.

**RESEARCH AREAS**

Proliferation, Immune System, Bone and Cartilage, Chemotaxis, Wound Healing, AIDS/HIV, Cell Culture

**RECONSTITUTION**

See Certificate of Analysis (COA) for lot specific reconstitution information.

**REFERENCES**

O'Halloran DJ, Tsatsoulis A, Whitehouse RW, Holmes SJ, Adams JE and Shalet SM. 1993. J Clin Endocrinol Metab. 76(5): 1344-1348. Welniak LA, Sun R and Murphy WJ. 2002. J Leukoc Biol. 71(3): 381-387. Dorshkind K and Horseman ND. Bioessays. 2001. 23(3): 288-294.

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