Data sheet

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Jena Bioscience

GH1, GH-22K
Pituitary Growth Hormone
human, recombinant, *E. coli*

Cat. No.	Amount
PR-426	500 µg

For *in vitro* use only
Quality guaranteed for 12 months
Store at -20°C

Avoid freeze / thaw cycles

Form
Lyophilized. Pituitary Growth Hormone protein was lyophilized from a 1 mg/ml solution with 0.0045 mM $NaHCO_3$ and pH 11.0.

Solubility
It is recommended to reconstitute and dilute the lyophilized GH in 0.4% $NaHCO_3$ adjusted to pH 11.0, which can then be further diluted to other aqueous solutions. It is recommended when diluting to below 10 ug/ml that the dilution solution will contain carrier protein (BSA or other) to avoid non-specific absorption of the hGH to plastic tubes.

Activity
3 U/mg

Endotoxin
Less than 0.1 ng/µg (IEU/µg) of GH.

Molecular Weight
22 kDa

Purity
≥ 95% by SDS-PAGE and RP-HPLC

Description
The 22 kDa human GH (GH-22K) is produced in the pituitary by alternative splicing of GH mRNA. Pituitary growth hormone (GH) plays diverse roles in the promotion of cell growth and metabolism. GH has been shown to influence the development of the immune organ and the function of immune cells. The binding of GH to its receptor causes dimerization of two growth hormone receptors (GHR), which, in turn, initiates the signal transduction in the cell.
Recombinant human Pituitary Growth Hormone produced in *E. coli* is a single, non-glycosylated, polypeptide chain containing 192 amino acids and having a molecular mass of 22.4 kDa.
Pituitary Growth Hormone is purified by proprietary chromatographic techniques.

Selected References:

Ye *et al.* (2003) Cloning of Novel Pituitary Growth Hormone Gene from Rhinopithecus roxellanae. *Yi Chuan* **25**:291.
Ezzat *et al.* (2005) The Zinc Finger Ikaros Transcription Factor Regulates Pituitary Growth Hormone and Prolactin Gene Expression Through Distinct Effects on Chromatin Accessibility. *Mol. Endocrinol.* **19**:1004.
Lora *et al.* (2005) Synergistic role for pituitary growth hormone in the regulation of hepatic estrogen and progesterone receptors and vitellogenesis in female freshwater turtles, Chrysemys picta. *Gen. Comp. Endocrinol.* **140**:25.
Xu *et al.* (2004) Intermittent hypoxia causes a suppressed pituitary growth hormone through somatostatin. *Neuro. Endocrinol. Lett.* **25**:361.
Morel *et al.* (2004) Ectopic acromegaly: localization of the pituitary growth hormone-releasing hormone producing tumor by In-111 pentetreotide scintigraphy and report of two cases. *Clin. Nucl. Med.* **29**:841.
Maniou *et al.* (2004) Episodic molecular evolution of pituitary growth hormone in Cetartiodactyla. *J. Mol. Evol.* **58**:743.