

human cell expressed Growth Hormone^{hex}

Source	A DNA sequence encoding the human growth hormone protein sequence (containing the signal peptide sequence and the mature growth hormone sequence) was expressed in modified human 293 cells.
Molecular Mass	Apollo Growth Hormone ^{hex} migrates as a band with an apparent MW of 20 kDa in SDS-PAGE. This compares with the predicted molecular mass of 22.1 kDa.
pI	Unmodified Growth Hormone has a predicted pI of 5.27.
Purity	>95%, as determined by SDS-PAGE and visualized by silver stain.
Formulation	When reconstituted in 0.5 ml sterile phosphate-buffered saline, the solution will contain 1% human serum albumin (HSA) and 10% trehalose.
Reconstitution	It is recommended that 0.5 ml of sterile phosphate-buffered saline be added to the vial.
Storage	Lyophilized products should be stored at 2 to 8 °C. Following reconstitution short-term storage at 4 °C is recommended, and longer-term storage of aliquots at -18 to -20 °C. Repeated freeze thawing is not recommended.
Background Information	<p>Human growth hormone (hGH) is a member of the somatotropin/prolactin family of hormones. Its activity is required for normal human growth and development. It regulates an extensive variety of physiological functions relating to human growth and metabolism, primarily by inducing the expression of insulin-like growth factor 1 (IGF-1). hGH is synthesized and secreted into the circulation by acidophilic or somatotrophic cells of the anterior pituitary gland in response to hGH releasing hormone (HGHR) from the hypothalamus.</p> <p>hGHR activation also enhances the levels of hormones and neurotransmitters in the CNS, including IGF-1 and somatostatin.</p> <p>The effects of hGH activity include the growth of bone, cartilage, and soft tissues, which occurs maximally during puberty. Specifically, hGH increases calcium retention and strengthens and increases the mineralization of bone, increases muscle mass, reduces liver uptake of glucose, and promotes lipolysis. A deficiency of hGH or a lack of HGHR activation results in short stature while excessive hGH causes acromegaly. Recombinant hGH has been used clinically to treat hGH deficiency or other types of conditions that involve shortness, including Turner syndrome.</p> <p>hGH may exist in a variety of forms resulting from alternative splicing, differential posttranslational modifications, oligomerization, binding to GH-binding proteins, and proteolytic processing.</p>
Theoretical Sequence	FPTIPLSRLFDNAMLRAHRLHQLAFDITYQEFEEAYIPKEQKYSFLQNPQTSLCFSES IPTPSN REETQQKSNLELLRISLLL IQSWLEPVQFLRSV FANSLVYGASDSNVYDLLKDL EEGIQTLMG RLEDGSPRTGQIFKQTYSKFDTNSHND DALLKNYGLLYCFRKMDK VETFLRIVQCRSVEGS CGF

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