

Active Recombinant Human GH1, Animal Free

Cat. No. GH1-132H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant human GH is a protein composed of 22.9 kDa, 205 amino residues. Human recombinant protein expressed in <i>Nicotiana benthamiana</i> . Recombinant human Growth Hormone contains a 6-His-tag at the N-terminal end, is produced by transient expression in non-transgenic plants and is purified by sequential chromatography (FPLC). This product contains no animal-derived components or impurities. Animal free product.
Species	Human
Source	Nicotiana Benthamiana
ProteinLength	205 a.a.
Description	GH is a member of the somatotropin/prolactin family of hormones which play an important role in growth control. The gene, along with four other related genes, is located at the growth hormone locus on chromosome 17 where they are interspersed in the same transcriptional orientation; an arrangement which is thought to have evolved by a series of gene duplications. The five genes share a remarkably high degree of sequence identity. Alternative splicing generates additional isoforms of each of the five growth hormones, leading to further diversity and potential for specialization. This particular family member is expressed in the pituitary but not in placental tissue as is the case for the other four genes in the growth hormone locus. Mutations in or deletions of the gene lead to growth hormone deficiency and short stature.

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Form	Lyophilized from a PBS 0.05M buffer at pH 7.5.
Bio-activity	The biological activity of human Growth Hormone is measured by cell proliferation using Nb2-11 cells. ED50 ≤ 0.04-0.1 ng/mL
Molecular Mass	Recombinant human GH is a protein composed of 22.9 kDa, 205 amino residues.
AA Sequence	HHHHHHFPTIPLSRPFDNAMLRAHRLHQLAFDTYQEFEEAYIPKEQKYSFLQNPQTS LCFSESIPTSPNREETQQ KSNLELLRISLLLIQSWLEPVQFLRSVFANSLVYGASDSN VYDLLKDLEEGIQTLMGRLEDGSPRTGQIFKQTYS KFDTNSHNDDALLKNYGLLYCF RKDMDKVETFLRIVQCRSVEGSCGFAG
Endotoxin	< 0.04="" eu="" ug="" protein="" (lal="">
Purity	>97% by SDS-PAGE gel
Applications	Western blot, Immunogen
Storage	This lyophilized preparation is stable at 2-8o C for short term, long storage it should be kept at -20oC. Reconstituted protein should be stored in working aliquots at –20°C and it is recommended to add a carrier protein (0.1% HSA or BSA). Repeated freezing and thawing is not recommended.
Reconstitution	Lyophilized protein should be reconstituted in water to a concentration of 50 ng/ul. Upon reconstitution, It can be stored in working aliquots at –20°C for future use. Optimal reconstitution please follow batch Quality Control sheet instructions.

GENE INFORMATION

Gene Name	GH1 growth hormone 1 [Homo sapiens]
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Official Symbol	GH1
Synonyms	GH1; growth hormone 1; somatotropin; GH; GH N; GHN; hGH N; pituitary growth hormone; GH-N; hGH-N; IGHD1B;
Gene ID	2688
mRNA Refseq	NM_000515
Protein Refseq	NP_000506
MIM	139250
UniProt ID	P01241
Chromosome Location	17q22-q24
Pathway	Adipogenesis, organism-specific biosystem; Cytokine Signaling in Immune system, organism-specific biosystem; Cytokine-cytokine receptor interaction, organism-specific biosystem; Cytokine-cytokine receptor interaction, conserved biosystem; Diabetes pathways, organism-specific biosystem; Disease, organism-specific biosystem; Endochondral Ossification, organism-specific biosystem;
Function	growth factor activity; growth hormone receptor binding; growth hormone receptor binding; hormone activity; metal ion binding; prolactin receptor binding; protein binding;