GH1/Somatotropin Protein, Human (HEK293, N-His, C-Myc)

Cat. No.:	HY-P700412
Synonyms:	GH; GH-N; GHN; hGH-N; Growth hormone; Pituitary growth hormone; growth hormone 1; GH1; IGHD1B; Somatotropin; hGH
Species:	Human
Source:	HEK293
Accession:	P01241 (F27-F217)
Gene ID:	2688
Molecular Weight:	27.2 kDa

PROPERTIES

AA Sequence	F P T I P L S R L F D N A M L R A H R L H Q L A F D T Y Q E F E E A Y I P K E Q K Y S F L Q N P Q T S L C F S E S I P T P S N R E E T Q Q K S N L E L L R I S L L L I Q S W L E P V Q F L R S V F A N S L V Y G A S D S N V Y D L L K D L E E G I Q T L M G R L E D G S P R T G Q I F K Q T Y S K F D T N S H N D D A L L K N Y G L L Y C F R K D M D K V E T F L R I V Q C R S V E G S C G F
Biological Activity	Measured by its binding ability in a functional ELISA. Immobilized GH1 at 1 μg/mL can bind human GHR, the EC_{50} of the protein is ≤25.29 ng/ml.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of 20 mM Tris-HCl, 0.5 M NaCl, 6% Trehalose, pH 8.0
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	The Somatotropin (GH) protein plays a pivotal role in growth control, exerting its primary influence on body growth by stimulating the liver and other tissues to secrete insulin-like growth factor 1 (IGF-1). GH serves as a potent regulator of both the differentiation and proliferation of myoblasts, contributing significantly to the overall growth and development of the organism. Additionally, it plays a crucial role in enhancing amino acid uptake and promoting protein synthesis in muscle and various tissues. Structurally, GH exists in various forms, including monomers, dimers, trimers, tetramers, and

pentamers, either disulfide-linked or non-covalently associated, in homomeric and heteromeric combinations. Furthermore, GH can form complexes with GH binding protein (GHBP) or with the alpha2-macroglobulin complex, underscoring its versatile molecular interactions that contribute to its multifaceted roles in growth regulation and tissue development.

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