abcam

Product datasheet

Recombinant human Growth Hormone protein (Animal Free) ab217403

Description

Product name	Recombinant human Growth Hormone protein (Animal Free)
Biological activity	Determined by its ability to stimulate the proliferation of rat Nb2-11 cells. The expected ED_{50} is ≤ 0.05 ng/ml, corresponding to a specific activity of ≥ 2 x 10^7 units/mg.
Purity	> 98 % SDS-PAGE. >98% by HPLC.
Expression system	Escherichia coli
Accession	P01241
Protein length	Full length protein
Animal free	Yes
Nature	Recombinant
Species	Human
Sequence	FPTIPLSRLF DNAMLRAHRL HQLAFDTYQE FEEAYIPKEQ KYSFLQNPQT SLCFSESIPT PSNREETQQK SNLELLRISL LLIQSWLEPV QFLRSVFANS LVYGASDSNV YDLLKDLEEG IQTLMGRLED GSPRTGQIFK QTYSKFDTNS HNDDALLKNY GLLYCFRKDM DKVETFLRIV QCRSVEGSCG F
Predicted molecular weight	22 kDa
Amino acids	27 to 217
Additional sequence information	This product is for the mature full length protein. The signal peptide is not included.

Specifications

Our Abpromise guarantee covers the use of **ab217403** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	Functional Studies SDS-PAGE HPLC
Form	Lyophilized

Preparation and Storage

Stability and Storage

Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.

This product is an active protein and may elicit a biological response in vivo, handle with caution.

Reconstitution

Centrifuge vial prior to opening. Reconstitute in water to 0.1-1.0 mg/ml. Do not vortex. Note: Allow the reconstituted vial to sit at room temperature for 1 hour before use. Do not vortex. Store at 2°C to 8°C for 1 week, or prepare for extended storage. For Extended Storage: Follow reconstitution with further dilution in a buffer containing a carrier protein (example PBS containing 5% Trehalose). Store working aliquots at -20°C to -80°C. Avoid repeated freeze-thaw cycles.

General Info

Function

Plays an important role in growth control. Its major role in stimulating body growth is to stimulate the liver and other tissues to secrete IGF-1. It stimulates both the differentiation and proliferation of myoblasts. It also stimulates amino acid uptake and protein synthesis in muscle and other tissues.

Involvement in disease

Defects in GH1 are a cause of growth hormone deficiency isolated type 1A (IGHD1A) [MIM:262400]; also known as pituitary dwarfism I. IGHD1A is an autosomal recessive deficiency of GH which causes short stature. IGHD1A patients have an absence of GH with severe dwarfism and often develop anti-GH antibodies when given exogenous GH.
Defects in GH1 are a cause of growth hormone deficiency isolated type 1B (IGHD1B) [MIM:612781]; also known as dwarfism of Sindh. IGHD1B is an autosomal recessive deficiency of GH which causes short stature. IGHD1B patients have low but detectable levels of GH. Dwarfism is less severe than in IGHD1A and patients usually respond well to exogenous GH.
Defects in GH1 are the cause of Kowarski syndrome (KWKS) [MIM:262650]; also known as pituitary dwarfism VI.
Defects in GH1 are a cause of growth hormone deficiency isolated type 2 (IGHD2) [MIM:173100]. IGHD2 is an autosomal dominant deficiency of GH which causes short stature. Clinical severity is variable. Patients have a positive response and immunologic tolerance to growth hormone therapy.

Sequence similarities

Belongs to the somatotropin/prolactin family.

Cellular localization

Secreted.

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