

## Product datasheet

# Recombinant human Growth Hormone protein (Active) ab280333

[5 Images](#)

### Description

<b>Product name</b>	Recombinant human Growth Hormone protein (Active)
<b>Biological activity</b>	Fully biologically active determined by the dose dependent cell proliferation of rat Nb2-11 lymphoma cell line.  ED50 is $\leq 0.21$ ng/ml, corresponding to a specific activity of $4.76 \times 10^6$ units/mg.
<b>Purity</b>	$\geq 95$ % SDS-PAGE. =95% Purity by HPLC
<b>Endotoxin level</b>	$\leq 0.005$ Eu/ $\mu$ g
<b>Expression system</b>	HEK 293 cells
<b>Accession</b>	<b><u>P01241</u></b>
<b>Protein length</b>	Full length protein
<b>Animal free</b>	Yes
<b>Carrier free</b>	Yes
<b>Nature</b>	Recombinant
<b>Species</b>	Human
<b>Sequence</b>	FPTIPLSRLF DNAMLRAHRL HQLAFDTYQE FEEAYIPKEQ KYSFLQNPQT SLCFSESIPT PSNREETQQK SNLELLRISL LLIQSWLEPV QFLRSVFANS LVYGASDSNV YDLLKDLEEG IQTLMGRLED GSPRTGQIFK QTYSKFDTNS HNDDALLKNY GLLYCFRKDM DKVETFLRIV QCRSVEGSCG F
<b>Predicted molecular weight</b>	22 kDa
<b>Actual molecular weight</b>	22 kDa
<b>Molecular weight information</b>	Predicted MW is 22186.1 Da (+/- 10 Da by ESI-TOF). Observed mass is 22187.15
<b>Amino acids</b>	27 to 217
<b>Additional sequence information</b>	N-terminal glycine. Full-length mature chain lacking the signal peptide.

### Specifications

Our **Abpromise guarantee** covers the use of **ab280333** in the following tested applications.

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

## Applications

SDS-PAGE  
Mass Spectrometry  
HPLC  
Functional Studies  
Sandwich ELISA

## Form

Lyophilized

## Preparation and Storage

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### Stability and Storage

Shipped at Room Temperature. Store at Room Temperature.

pH: 7.40

Constituents: 0.727% Dibasic monohydrogen potassium phosphate, 0.248% Monobasic dihydrogen potassium phosphate, 10.26% Trehalose

Buffer lyophilized from.

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

### Reconstitution

Reconstitute with phosphate buffered saline. Store lyophilized form at room temperature.

Reconstitute, aliquot and store at -80°C for 12 months or +4°C for 1 week. Avoid repeated freeze-thaw. Lyophilized contents may appear as either a translucent film or a white powder. This variance does not affect the quality of the product. Lyophilized contents may appear as either a translucent film or a white powder. This variance does not affect the quality of the product.

## General Info

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### 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.

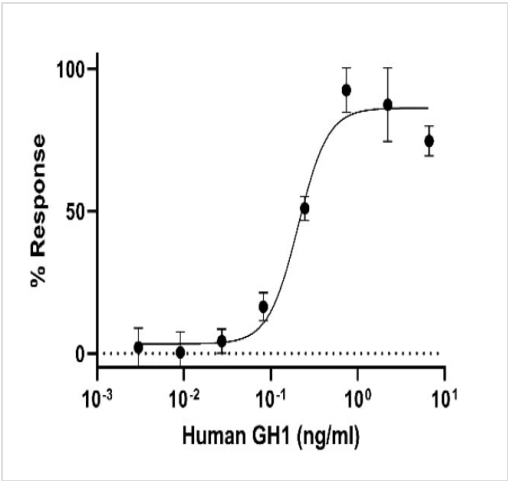
### Sequence similarities

Belongs to the somatotropin/prolactin family.

### Cellular localization

Secreted.

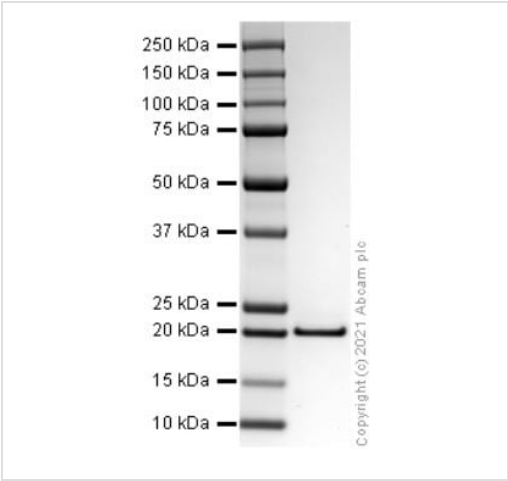
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Fully biologically active determined by the dose dependent cell proliferation of rat Nb2-11 lymphoma cell line.

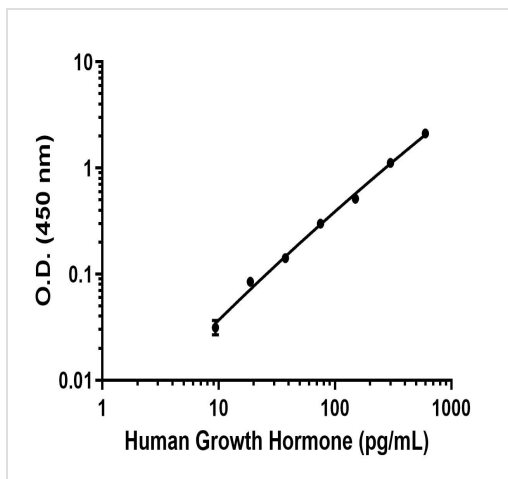
ED50 is  $\leq 0.21$  ng/ml, corresponding to a specific activity of  $4.76 \times 10^6$  units/mg.

Biological Activity - Recombinant human Growth Hormone protein (Active) (ab280333)



SDS-PAGE analysis of ab280333.

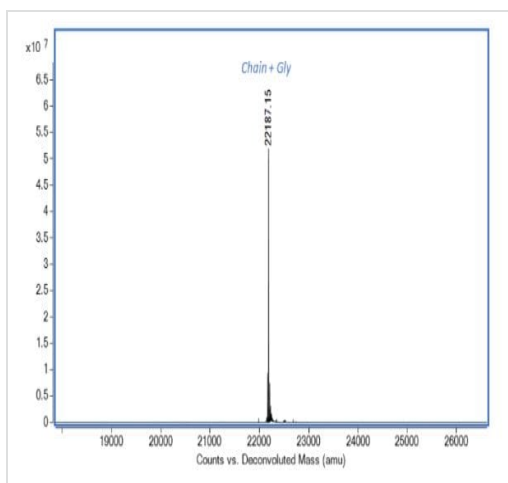
SDS-PAGE - Recombinant human Growth Hormone protein (Active) (ab280333)



Sandwich ELISA - Recombinant human Growth Hormone protein (Active) (ab280333)

Sandwich ELISA - Recombinant human Growth Hormone protein standard curve.

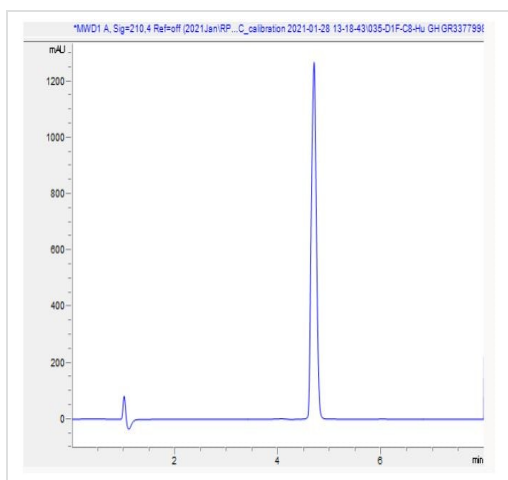
Background subtracted standard curve using Human Growth Hormone Antibody Pair - BSA and Azide free (**ab241146**) and Recombinant human Growth Hormone protein (ab280333) in sandwich ELISA. The ELISA was performed using the components of the corresponding SimpleStep® kit, which uses the same antibody pair with a different formulation and format.



Mass Spectrometry - Recombinant human Growth Hormone protein (Active) (ab280333)

Mass determination by ESI-TOF.

Predicted MW is 22186.1 Da (+/- 10 Da by ESI-TOF). Observed mass is 22187.15



HPLC - Recombinant human Growth Hormone protein (Active) (ab280333)

HPLC analysis of ab280333.

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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