

Product datasheet

Recombinant human Growth hormone receptor protein (Fc Chimera Active) ab180056

3 Images

Description

<b>Product name</b>	Recombinant human Growth hormone receptor protein (Fc Chimera Active)	
<b>Biological activity</b>	Measured by its ability to inhibit GH-induced proliferation of Nb2-11 rat lymphoma cells in the presence of 0.2 ng/mL of rhGH. The ED50 for this effect is typically 0.8 - 3.5 ng/ml.	
<b>Purity</b>	> 95 % SDS-PAGE.	
<b>Endotoxin level</b>	< 1.000 Eu/µg	
<b>Expression system</b>	HEK 293 cells	
<b>Accession</b>	<a href="#">P10912</a>	
<b>Protein length</b>	Protein fragment	
<b>Animal free</b>	No	
<b>Nature</b>	Recombinant	
<b>Species</b>	Human	
<b>Sequence</b>	<pre> AILSRAPWSLQSVNPGLKTNSSKEPKFTKCRSPERET FSCHWTDEVHHGT KNLGPIQLFYTRRNTQEWTTQEWKECPDYVSAGENCY FNSSFTSIWIPYC IKLTSNGGTVDEKCFVDEIVQDPPIALNWTLNLSLT GIHADIQVRWE APRNADIQKGWMVLEYELQYKEVNETKWKMMDPILTT SVPVYSLKVDKEY EVRVRSKQRNSGNYGEFSEVLVTLQPMSQFTCEED FY </pre>	
<b>Predicted molecular weight</b>	54 kDa including tags	
<b>Amino acids</b>	27 to 264	
<b>Additional sequence information</b>	Growth hormone receptor Fc Chimera, fused with Fc fragment of Human IgG1 at the C terminus.	

Specifications

Our [Abpromise guarantee](#) covers the use of **ab180056** in the following tested applications.

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

<b>Applications</b>	Functional Studies SDS-PAGE
<b>Form</b>	Lyophilised
<b>Preparation and Storage</b>	
<b>Stability and Storage</b>	Shipped at 4°C. Store at 4°C (stable for up to 12 months). Store at -80°C. Avoid freeze / thaw cycle. For long term storage it is recommended to add a carrier protein on reconstitution (0.1% HSA or BSA). pH: 7.00 Constituents: 5% Trehalose, 0.61% Tris, 0.75% Glycine  Lyophilized from 0.22 µm filtered solution.  This product is an active protein and may elicit a biological response in vivo, handle with caution.
<b>Reconstitution</b>	It is recommended to reconstitute the lyophilized protein in deionized water to a final concentration of 1 mg/ml. Solubilize for 30 to 60 minutes at room temperature with occasional gentle mixing.
<b>General Info</b>	
<b>Function</b>	Receptor for pituitary gland growth hormone involved in regulating postnatal body growth. On ligand binding, couples to the JAK2/STAT5 pathway. The soluble form (GHBP) acts as a reservoir of growth hormone in plasma and may be a modulator/inhibitor of GH signaling. Isoform 2 up-regulates the production of GHBP and acts as a negative inhibitor of GH signaling.
<b>Tissue specificity</b>	Expressed in various tissues with high expression in liver and skeletal muscle. Isoform 4 is predominantly expressed in kidney, bladder, adrenal gland and brain stem. Isoform 1 expression in placenta is predominant in chorion and decidua. Isoform 4 is highly expressed in placental villi. Isoform 2 is expressed in lung, stomach and muscle. Low levels in liver.
<b>Involvement in disease</b>	Defects in GHR are a cause of Laron syndrome (LARS) [MIM:262500]. A severe form of growth hormone insensitivity characterized by growth impairment, short stature, dysfunctional growth hormone receptor, and failure to generate insulin-like growth factor I in response to growth hormone. Defects in GHR may be a cause of idiopathic short stature autosomal (ISSA) [MIM:604271]. Short stature is defined by a subnormal rate of growth.
<b>Sequence similarities</b>	Belongs to the type I cytokine receptor family. Type 1 subfamily. Contains 1 fibronectin type-III domain.
<b>Domain</b>	The WSXWS motif appears to be necessary for proper protein folding and thereby efficient intracellular transport and cell-surface receptor binding. The box 1 motif is required for JAK interaction and/or activation. The extracellular domain is the ligand-binding domain representing the growth hormone-binding protein (GHBP). The ubiquitination-dependent endocytosis motif (UbE) is required for recruitment of the ubiquitin conjugation system on to the receptor and for its internalization.
<b>Post-translational modifications</b>	The soluble form (GHBP) is produced by phorbol ester-promoted proteolytic cleavage at the cell surface (shedding) by ADAM17/TACE. Shedding is inhibited by growth hormone (GH) binding to the receptor probably due to a conformational change in GHR rendering the receptor inaccessible

to ADAM17.

On GH binding, phosphorylated on tyrosine residues in the cytoplasmic domain by JAK2.

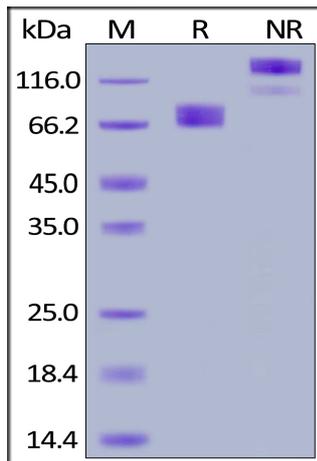
On ligand binding, ubiquitinated on lysine residues in the cytoplasmic domain. This ubiquitination is not sufficient for GHR internalization.

### Cellular localization

Secreted; Cell membrane. On growth hormone binding, GHR is ubiquitinated, internalized, down-regulated and transported into a degradative or non-degradative pathway and Cell membrane.

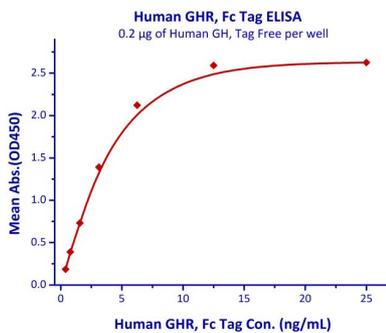
Remains fixed to the cell membrane and is not internalized.

### Images



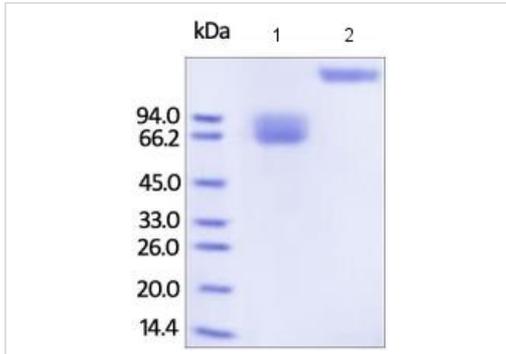
Human GHR, Fc Tag on SDS-PAGE under reducing (R) and non-reducing (NR) conditions. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.

SDS-PAGE - Recombinant human Growth hormone receptor protein (Fc Chimera Active) (ab180056)



Immobilized Human GH, Tag Free at 2µg/mL (100 µL/well) can bind Human GHR, Fc Tag with a linear range of 0.19-3.1 ng/mL.

Functional Studies - Recombinant human Growth hormone receptor protein (Fc Chimera Active) (ab180056)



SDS-PAGE - Recombinant human Growth hormone receptor protein (Fc Chimera Active) (ab180056)

SDS-PAGE analysis of ab180056 in reducing (lane 1) and non-reducing (lane 2) conditions. Gel stained overnight with Coomassie Blue. As a result of glycosylation, DTT-reduced protein migrates as 66-85 kDa and non-reduced protein migrates as 135-160 kDa.

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

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