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[Primary Antibody]

Rabbit Anti-Growth hormone receptor antibody

Catalog Number: SL23024R

FOR RESEARCH USE ONLY

[DATASHEET]

Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Target:	Growth hormone receptor
Immunogen:	KLH conjugated synthetic peptide derived from human GHR: 551-638/638 <Cytoplasmic>
Purification:	affinity purified by Protein A
Concentration:	1mg/ml
Storage:	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. Shipped at 4℃. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Applications:	WB=1:500-2000 not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Reactivity:	Human(predicted:Chicken,Dog,Pig,Cow,Rabbit,Sheep)
Predicted MW.:	68kDa
Subcellular Location:	The cell membrane
Background:	This gene encodes a member of the type I cytokine receptor family, which is a transmembrane receptor for growth hormone. Binding of growth hormone to the receptor leads to receptor dimerization and the activation of an intra- and intercellular signal transduction pathway leading to growth. Mutations in this gene have been associated with Laron syndrome, also known as the growth hormone insensitivity syndrome (GHIS), a disorder characterized by short stature. In humans and rabbits, but not rodents, growth hormone binding protein (GHBP) is generated by proteolytic cleavage of the extracellular ligand-binding domain from the mature growth hormone receptor protein. Multiple alternatively spliced transcript variants have been found for this gene.[provided by RefSeq, Jun 2011]. **Function:** Receptor for pituitary gland growth hormone involved in regulating postnatal body growth. On ligand binding, couples to the JAK2/STAT5 pathway.

Important Note: This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

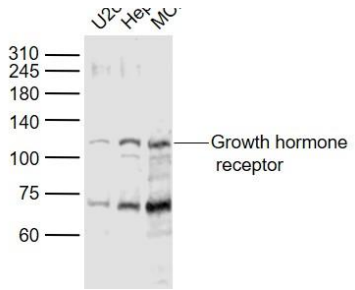
	The soluble form (GHBP) acts as a reservoir of growth hormone in plasma and may be a modulator/inhibitor of GH signaling. Isoform 2 up-regulates the production of GHBP and acts as a negative inhibitor of GH signaling. **Subunit:** On growth hormone (GH) binding, forms homodimers and binds JAK2 via a box 1-containing domain. Binding to SOCS3 inhibits JAK2 activation, binding to CIS and SOCS2 inhibits STAT5 activation. Interacts with ADAM17. **Subcellular Location:** Cell membrane; Single-pass type I membrane protein. Note=On growth hormone binding, GHR is ubiquitinated, internalized, down-regulated and transported into a degradative or non-degradative pathway. Isoform 2: Cell membrane; Single-pass type I membrane protein. Note=Remains fixed to the cell membrane and is not internalized. Growth hormone-binding protein: Secreted. Note=Complexed to a substantial fraction of circulating GH. **Tissue Specificity:** 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. **Post-translational modifications:** 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. DISEASE: 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. Note=The disease is caused by mutations affecting the gene represented in this entry. Idiopathic short stature autosomal (ISSA) [MIM:604271]: Short stature is defined by a subnormal rate of growth. Note=The disease is caused by mutations affecting the gene represented in this entry. **Similarity:** Belongs to the type I cytokine receptor family. Type 1 subfamily. Contains 1 fibronectin type-III domain. **Database links:**

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	Entrez Gene: 2690 Human **Entrez Gene:** 14600 Mouse **Entrez Gene:** 25235 Rat Omim: 600946 Human **SwissProt:** P10912 Human **SwissProt:** P16882 Mouse **SwissProt:** P16310 Rat **Unigene:** 125180 Human **Unigene:** 684631 Human **Unigene:** 3986 Mouse **Unigene:** 2178 Rat Growth hormone receptor (GHR) is a member of the cell factor/hematopoietic factor receptor superfamily. Growth hormone receptor binds to growth hormone (GH) in the form of a dimer, then induces tyrosine phosphorylation of Janus kinase 2 (JAK2: an important signal transducer for many cell factors, growth factors and Interferon) and other cell factors, and transmits signals into the cell through 4 different pathways, thereby producing a series of physiological effects.

[VALIDATION IMAGES]



Sample:
Lane 1: U2os (Human) Cell Lysate at 30 ug
Lane 2: HepG2 (Human) Cell Lysate at 30 ug
Lane 3: MCF-7 (Human) Cell Lysate at 30 ug
Primary: Anti-Growth hormone receptor (SL23024R) at 1/1000 dilution
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution
Predicted band size: 110/130 kD
Observed band size: 110 kD

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