# Recombinant Rat Growth Hormone Receptor/GHR Protein (His Tag)

**Catalog Number: PDMR100096**

**Note:** *Centrifuge before opening to ensure complete recovery of vial contents.*

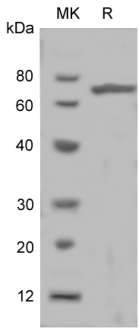
## Description

| | |
|---|---|
| **Species** | Rat |
| **Source** | Mammalian-derived Rat Growth Hormone Receptor protein Met1-Arg265, with an C-terminal His |
| **Calculated MW** | 29.0 kDa |
| **Observed MW** | 36 kDa |
| **Accession** | P16310 |
| **Bio-activity** | Not validated for activity |

## Properties

| | |
|---|---|
| **Purity** | > 95% as determined by reducing SDS-PAGE. |
| **Endotoxin** | < 1.0 EU/mg of the protein as determined by the LAL method |
| **Storage** | Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months. |
| **Shipping** | This product is provided as lyophilized powder which is shipped with ice packs. |
| **Formulation** | Lyophilized from a 0.2 μm filtered solution in PBS with 5% Trehalose and 5% Mannitol. |
| **Reconstitution** | It is recommended that sterile water be added to the vial to prepare a stock solution of 0.5 mg/mL. Concentration is measured by UV-Vis. |

## Data




SDS-PAGE analysis of Rat Growth Hormone Receptor/GHR proteins, 2 μg/lane of Recombinant Rat Growth Hormone Receptor/GHR proteins was resolved with SDS-PAGE under reducing conditions, showing bands at 36 kDa.

## Background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Growth hormone receptor, also known as GH receptor and GHR, is a single-pass type I membrane protein which belongs to thetype I cytokine receptor family and type 1 subfamily. GHR contains onefibronectin type-III domain. Growth hormone receptor / GHR is expressed in various tissues with high expression in liver and skeletal muscle. Isoform4of GHR is predominantly expressed in kidney, bladder, adrenal gland and brain stem. Isoform1 expression of GHR in placenta is predominant in chorion and decidua. Isoform4is highly expressed in placental villi. Isoform2of GHR is expressed in lung, stomach and muscle. Growth hormone receptor / GHR is a receptor for pituitary gland growth hormone. It is involved in regulating postnatal body growth. On ligand binding, it couples to the JAK2 / STAT5 pathway. Isoform2of GHR up-regulates the production of GHBP and acts as a negative inhibitor of GH signaling. Defects in GHR are a cause of Laron syndrome (LARS) which is 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 also be a cause of idiopathic short stature autosomal (ISSA) which is defined by a subnormal rate of growth.


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