Data Sheet (Cat.No.TMPY-07147)

TargetMol

GHR/Growth Hormone R Protein, Human, Recombinant (hFc)

General Information

Synonyms:	GHBP;GHIP
Protein Construction:	A DNA sequence encoding the Human GHR (P10912) (Ala27-Tyr264) was expressed with the Fc region of human IgG1 at the C-terminus.
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P10912
Molecular Weight:	54.39 kDa (predicted); 68.3 kDa (reducing contition, due to glycosylation); 130.5 kDa (SEC-MALS)

QC Testing

Biological Activity:	Immobilized Growth Hormone Protein, Human, Recombinant (Cat#TMPY-00394) at 2 μg/mL (100 μL/well) can bind GHR/Growth Hormone R Protein, Human, Recombinant (hFc) (Cat#TMPY-07147), the EC50 is 8-26 ng/mL.
Purity:	≥ 90% as determined by SDS-PAGE. ≥ 90% as determined by SEC-HPLC. ≥ 90% as determined by SEC-MALS. (Routinely tested)
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from sterile PBS, pH 7.4. Please contact us for any concerns or special requirements. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. Please refer to the specific buffer information in the hardcopy of datasheet or the lot-specific COA.

Preparation and Storage

Reconstitution:

Please refer to the lot-specific COA.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

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.