Recombinant Mouse GHR/GHBP Protein (His &Fc Tag)

Catalog Number: PKSM040889

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

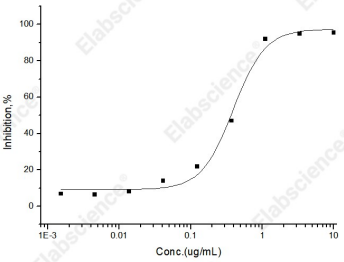
Description

Species	Mouse
Source	HEK293 Cells-derived Mouse GHR/GHBP protein Met 1-Gln 273, with an C-terminal His & Fc
Calculated MW	56.8 kDa
Observed MW	70-80 kDa
Accession	NP_034414.2
Bio-activity	Measured by its ability to inhibit proliferation of INS-1 cells induced by human growth hormone. The ED_{50} for this effect is 0.5-2 μg/mL in the presence of 50 ng/mL human growth hormone.

Properties

Purity	> 85% as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per μg 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 sterile PBS, pH 7.4 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 printed manual.
Reconstitution	Please refer to the printed manual for detailed information.

Data



Measured by its ability to Inhibit activation of GH pathway in a Luciferase receptor Assay System. The ED_{50} for this effect is typically 0.1-1 μg/mL in the presence of 50 ng/mL human growth hormone.

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.

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