

Mouse IGF-I R / IGF-1 R Protein, His Tag

Catalog # IGR-M5223



BIOSYSTEMS
Acro

Synonym

IGF-I R / IGF-1 R

Source

Mouse IGF-I R, His Tag (IGR-M5223) is expressed from human 293 cells (HEK293). It contains AA Glu 31 - His 936 (Accession # [Q60751-1](#)).

Predicted N-terminus: Glu 31 & Asp 742

Molecular Characterization

IGF-I R(Glu 31 - His 936)
Q60751-1

Poly-his

This protein carries a polyhistidine tag at the C-terminus. This protein contains a furin convertase cleavage site, 738-RRRR-741, and will be partially processed into N (α chain) and C-terminal fragment (partial β chain) with calculated MW of 81.7 kDa and 24.3 kDa respectively. The protein migrates as 50-55 kDa (partial β chain), 115-130 kDa (α chain) and 140-180 kDa (α chain & partial β chain) when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 1.0 EU per μ g by the LAL method / rFC method.

Purity

>90% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 μ m filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

Storage

For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

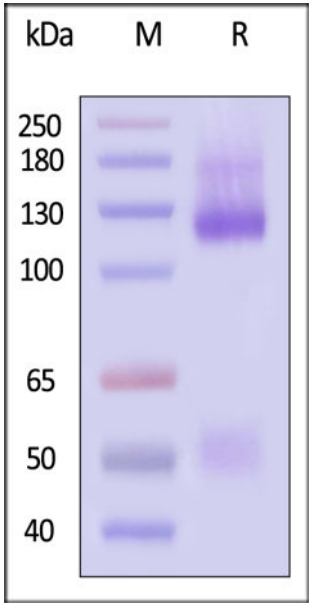
This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

ACRO Quality Management System

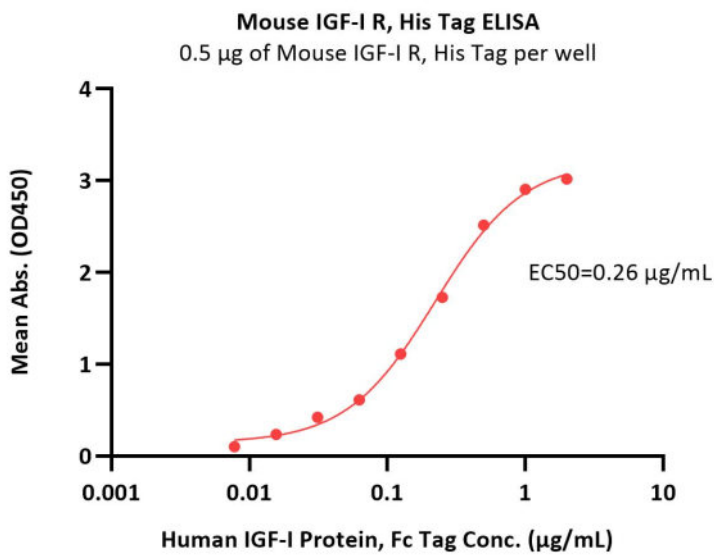
- [QMS\(ISO, GMP\)](#)
- [Quality Advantages](#)
- [Quality Control Process](#)

SDS-PAGE



Mouse IGF-I R, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With [Star Ribbon Pre-stained Protein Marker](#)).

Bioactivity-ELISA



Immobilized Mouse IGF-I R, His Tag (Cat. No. IGR-M5223) at 5 µg/mL (100 µL/well) can bind Human IGF-I Protein, Fc Tag (Cat. No. IG1-H5263) with a linear range of 0.004-0.5 µg/mL (QC tested).

Background

The Insulin-like Growth Factor 1 Receptor (IGF1) is also known as CD221, JTK13. and is a transmembrane receptor that is activated by IGF-1 and by the related growth factor IGF-2. It belongs to the large class of tyrosine kinase receptors. This receptor mediates the effects of IGF-1, which is a polypeptide protein hormone similar in molecular structure to insulin. IGF1R is make up of two alpha subunits and two beta subunits ,the Both the α and β subunits are synthesized from a single mRNA precursor. The precursor is then glycosylated, proteolytically cleaved, and crosslinked by cysteine bonds to form a functional transmembrane $\alpha\beta$ chain.The α chains are located extracellularly while the β subunit spans the membrane and are responsible for intracellular signal transduction upon ligand stimulation. IGF1R have a binding site for ATP, which is used to provide the phosphates for autophosphorylation. There is a 60% homology between IGF1R and the insulin receptor. In response to ligand binding, the α chains induce the tyrosine autophosphorylation of the β chains. This event triggers a cascade of intracellular signaling that, while somewhat cell type specific, often promotes cell survival and cell proliferation.



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