Biotinylated Rhesus macaque IGF-I R / IGF-1 R Protein, His Tag, ultra sensitivity (primary amine labeling) (MALS verified)

Catalog # IGR-R82H4

Synonym

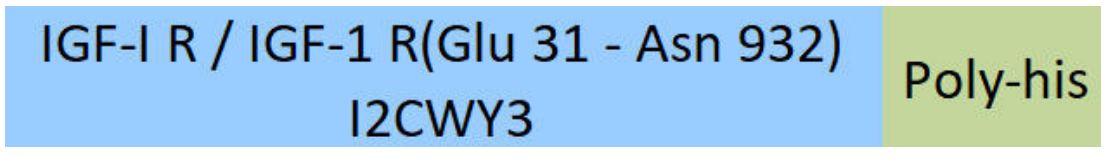
IGF-I R / IGF-1 R

Source

Biotinylated Rhesus macaque IGF-I R Protein, His Tag, primary amine labeling (IGR-R82H4) is expressed from human 293 cells (HEK293). It contains AA Glu 31 - Asn 932 (Accession # I2CWY3). It is the biotinylated form of Rhesus macaque IGF-I R Protein, His Tag (IGR-R52H3). It is the biotinylated form of Rhesus macaque IGF-I R Protein, His Tag (Cat. No. IGR-R52H3).

Predicted N-terminus: Glu 31 & Asp 741

Molecular Characterization



This protein carries a polyhistidine tag at the C-terminus.

The protein has a calculated MW of 81.1 kDa & 23.8 kDa. The protein migrates as 95-130 kDa when calibrated against Star Ribbon Pre-stained Protein Marker under reducing (R) condition (SDS-PAGE) due to glycosylation.

The protein is designed as a dimer.

Labeling

The primary amines in the side chains of lysine residues and the N-terminus of the protein are conjugated with biotins using standard chemical labeling method. A standard biotin reagent (13.5 angstroms) is used in this product.

Protein Ratio

Passed as determined by the HABA assay / binding ELISA.

Purity

>90% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 μm 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.

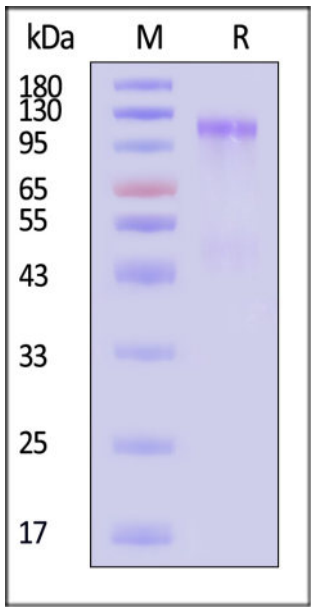
This product is stable after storage at:

- -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

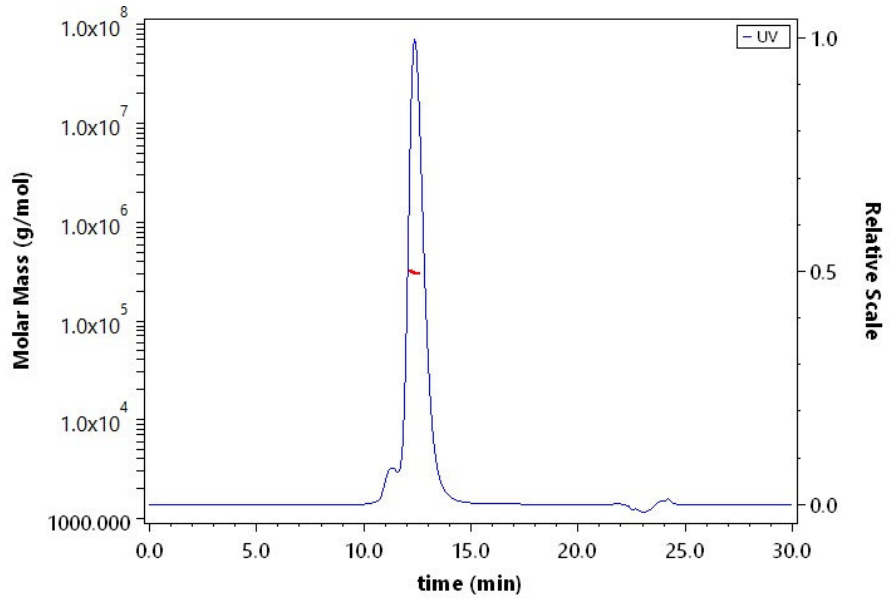
- QMS(ISO, GMP)
- Quality Advantages
- Quality Control Process

SDS-PAGE



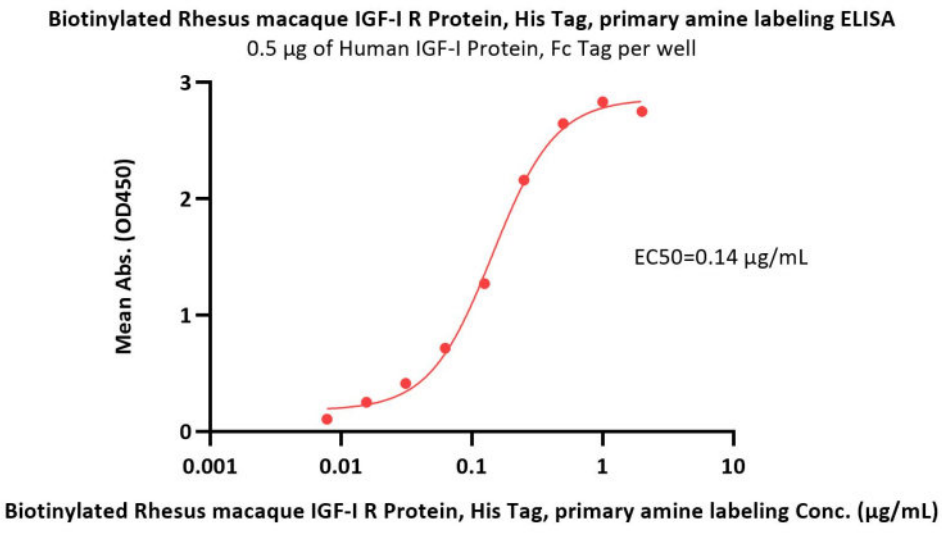
Biotinylated Rhesus macaque IGF-I R Protein, His Tag, primary amine labeling on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With Star Ribbon Pre-stained Protein Marker).

SEC-MALS



The purity of Biotinylated Rhesus macaque IGF-I R Protein, His Tag, primary amine labeling (Cat. No. IGR-R82H4) is more than 85% and the molecular weight of this protein is around 285-325 kDa verified by SEC-MALS.

Bioactivity-ELISA



Immobilized Human IGF-I Protein, Fc Tag (Cat. No. IG1-H5263) at 5 μg/mL (100 μL/well) can bind Biotinylated Rhesus macaque IGF-I R Protein, His Tag, primary amine labeling (Cat. No. IGR-R82H4) with a linear range of 0.008-0.25 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 αβ 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.