

Biotinylated Cynomolgus IGF-I R Protein, His,Avitag™ (MALS verified)

Catalog # IGR-C82E3



BIOSYSTEMS
Acro

Synonyms

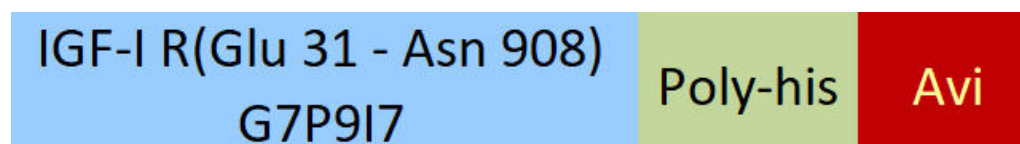
IGF1R, IGFR, JTK13, CD221, MGC142170, MGC142172, MGC18216

Source

Biotinylated Cynomolgus IGF-I R Protein, His,Avitag (IGR-C82E3) is expressed from human 293 cells (HEK293). It contains AA Glu 31 - Asn 908 (Accession # [G7P9I7](#)).

Predicted N-terminus: Glu 31

Molecular Characterization



This protein carries a polyhistidine tag at the C-terminus, followed by an Avi tag (Avitag™).

The protein has a calculated MW of 103.9 kDa. The protein migrates as 40-53 kDa and 100-120 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

Biotinylation of this product is performed using Avitag™ technology. Briefly, the single lysine residue in the Avitag is enzymatically labeled with biotin.

Protein Ratio

Passed as determined by the HABA assay / binding ELISA.

Purity

>95% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

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.

Shipping and Storage

This product is shipped at ambient temperature.

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

Please avoid repeated freeze-thaw cycles.

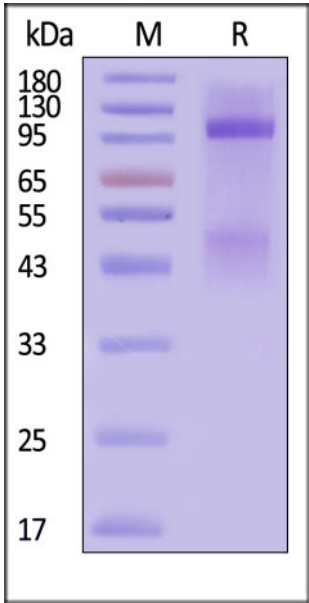
This product is stable after storage at:

- -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

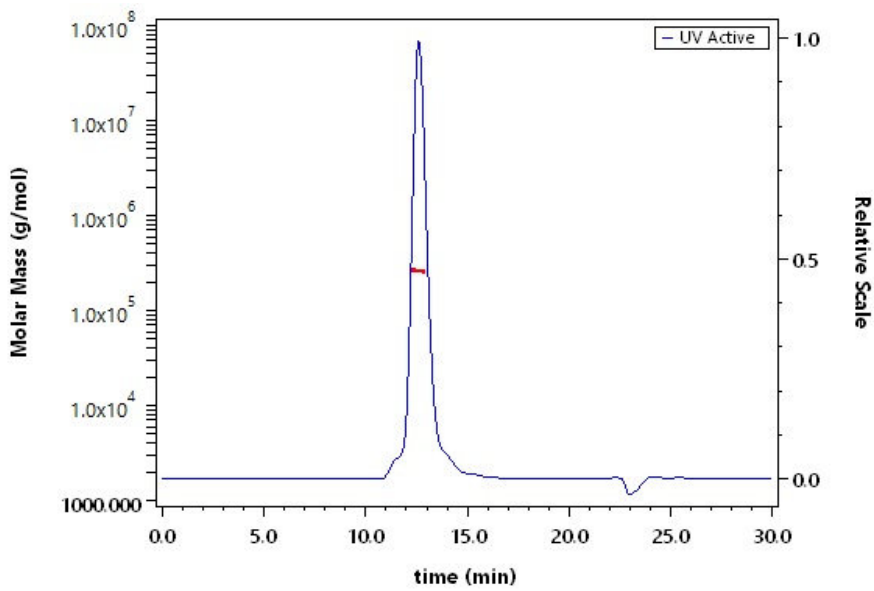
- [QMS\(ISO, GMP\)](#).
- [Quality Advantages](#)
- [Quality Control Process](#)

SDS-PAGE



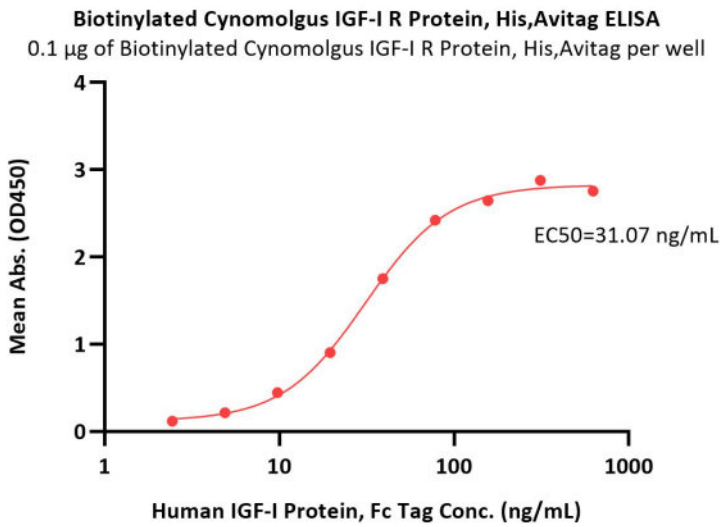
Biotinylated Cynomolgus IGF-I R Protein, His,Avitag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95% (With [Star Ribbon Pre-stained Protein Marker](#)).

SEC-MALS



The purity of Biotinylated Cynomolgus IGF-I R Protein, His,Avitag (Cat. No. IGR-C82E3) is more than 90% and the molecular weight of this protein is around 230-270 kDa verified by SEC-MALS.

Bioactivity-ELISA



Immobilized Biotinylated Cynomolgus IGF-I R Protein, His,Avitag (Cat. No. IGR-C82E3) at 1 µg/mL (100 µL/well) on streptavidin (Cat. No. STN-N5116) precoated (0.5 µg/well) plate can bind Human IGF-I Protein, Fc Tag (Cat. No. IG1-H5263) with a linear range of 2-78 ng/mL (QC tested).

Background

The Insulin-like Growth Factor 1 Receptor (IGF1R) is also known as CD221 and 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 hormone similar in molecular structure to insulin. IGF1R is made up of two α subunits and two β subunits. Both the α and β subunits are synthesized from a single mRNA precursor. The precursor is then glycosylated, proteolytically cleaved, and crosslinked by disulfide bonds to form a functional transmembrane $\alpha\beta$ chain. The α chains are located extracellularly, while the β subunits span the membrane and are responsible for intracellular signal transduction upon ligand stimulation. IGF1R has a binding site for ATP, which is used to provide the phosphates for autophosphorylation. There is 60% sequence 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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