

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

Catalog # IGR-H5229AI



Application

Human IGF-I R Protein, His Tag AIDD-Ready protein is designed for direct use in SPR assays. It is supplied in a sugar-free, glycerol-free formulation to eliminate refractive index interference in SPR. No desalting or buffer exchange is required before use, simplifying the SPR workflow and supporting high-throughput experimental validation to accelerate the transition from AI prediction to wet-lab validation.

Features and Advantages

- **Directly compatible with SPR:** No desalting or buffer exchange required; supplied as a liquid to reduce sample preparation and improve experimental efficiency.
- **High batch-to-batch consistency:** Each lot is released using SPR QC to ensure experimental reproducibility.
- **Validated with representative drugs:** SPR binding activity is validated using representative drug antibodies to ensure suitability for drug screening and evaluation.

Synonyms

IGF-I R / IGF-1 R

Source

Human IGF-I R Protein, His Tag (IGR-H5229AI) is expressed from human 293 cells (HEK293). It contains AA Glu 31 - Asn 932 (Accession # [P08069-1](#)).

Predicted N-terminus: Glu 31

Molecular Characterization

IGF-I R / IGF-1 R (Glu 31 - Asn 932)
P08069-1

Poly-His

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

The protein has a calculated MW of 104.8 kDa. The protein migrates as 42-48 kDa and 120-150 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.

Purity

>90% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

Formulation

Supplied as 0.2 µm filtered solution in 10 mM HEPES, 150 mM NaCl, pH7.4.

Contact us for customized product form or formulation.

Shipping and Storage

This product is supplied and shipped on dry ice.

Please avoid repeated freeze-thaw cycles.

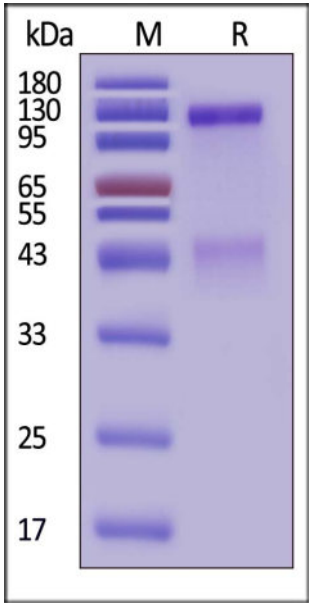
This product is stable after storage at:

- The product **MUST** be stored at -70°C or lower upon receipt;
- -70°C for 3 months under sterile conditions.

ACRO Quality Management System

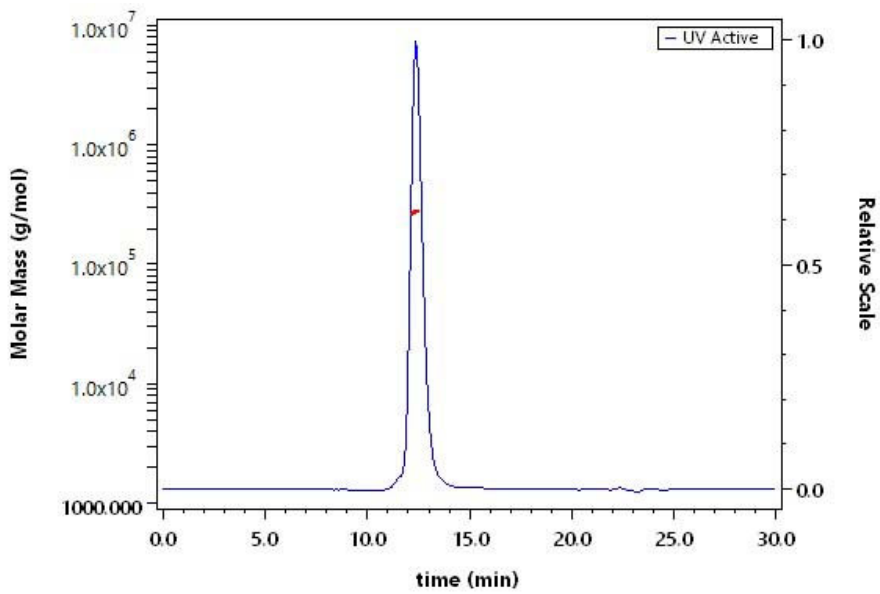
- [QMS\(ISO, GMP\)](#)
- [Quality Advantages](#)
- [Quality Control Process](#)

SDS-PAGE



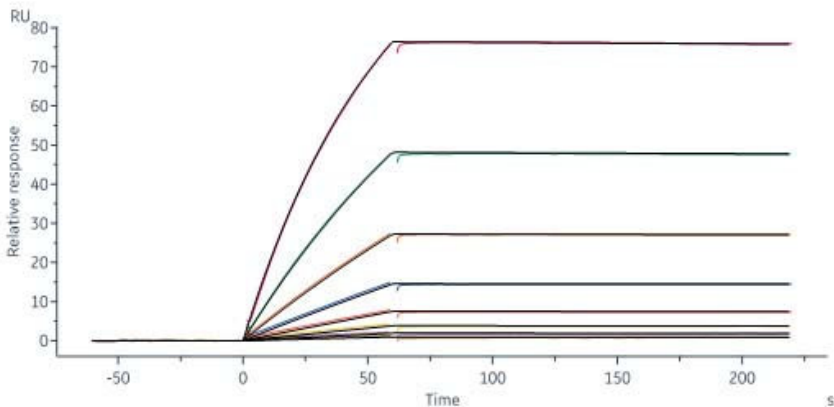
Human IGF-I R Protein, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With [Star Ribbon Pre-stained Protein Marker](#)).

SEC-MALS



The purity of Human IGF-I R Protein, His Tag (Cat. No. IGR-H5229AI) is more than 90% and the molecular weight of this protein is around 252-308 kDa verified by SEC-MALS.

Activity-SPR



Monoclonal Anti-IGF-I R, Human IgG1 (AM1042) captured on Protein A Chip can bind Human IGF-I R Protein, His Tag (Cat. No. IGR-H5229AI) with an affinity constant of 0.561 nM as determined in a SPR assay (Biacore 8K) (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 mR 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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