

Biotinylated Human Insulin R / CD220 Protein, His,Avitag™

Catalog # INR-H82E3



Synonyms

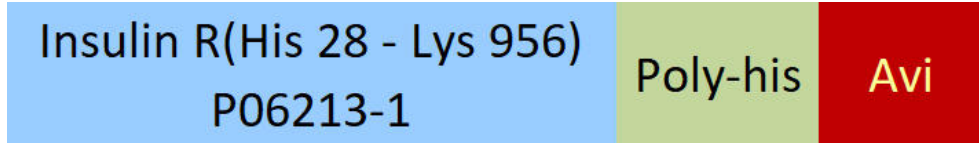
INSR, Insulin receptor, IR, CD220

Source

Biotinylated Human Insulin R Protein, His,Avitag (INR-H82E3) is expressed from human 293 cells (HEK293). It contains AA His 28 - Lys 956 (Accession # [P06213-1](#)).

Predicted N-terminus: His 28

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 109.4 kDa. The protein migrates as 40-50 kDa and 110-130 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under reducing (R) condition (SDS-PAGE) due to glycosylation.

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.

Endotoxin

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

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.

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.

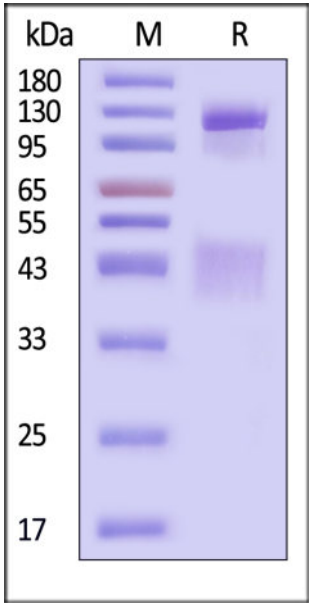
This product is stable after storage at:

- -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

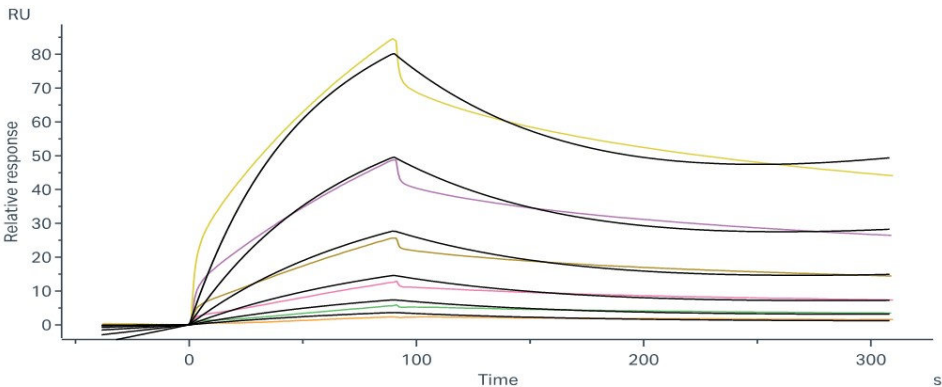
- [QMS\(ISO, GMP\)](#).
- [Quality Advantages](#)
- [Quality Control Process](#)

SDS-PAGE

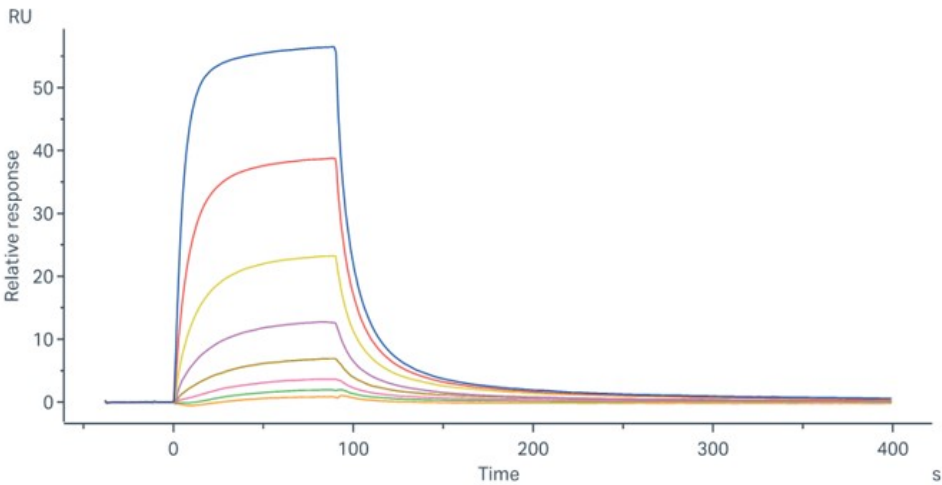


Biotinylated Human Insulin R Protein, His,Avitag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With [Star Ribbon Pre-stained Protein Marker](#)).

Bioactivity-SPR



Biotinylated Human Insulin R Protein, His,Avitag(Cat. No. INR-H82E3) immobilized on SA Chip can bind Insulin with an affinity constant of 450 nM as determined in a SPR assay (Biacore 8K) (QC tested).



Biotinylated Human Insulin R Protein, His,Avitag(Cat. No. INR-H82E3) immobilized on SA Chip can bind Human IGF-II, Fc Tag (Cat. No. IG2-H4260) with an affinity constant of 2.64 μ M as determined in a SPR assay (Biacore 8K) (Routinely tested).

Background

Insulin receptor (INSR) is also known as CD antigen CD220, which can be cleaved into the following 2 chains: Insulin receptor subunit alpha and Insulin receptor subunit beta. INSR is a tetramer of 2 alpha and 2 beta chains linked by disulfide bonds. The alpha chains carry the insulin-binding regions, while the beta chains carry the kinase domain. Forms a hybrid receptor with IGF1R, the hybrid is a tetramer consisting of 1 alpha chain and 1 beta chain of INSR and 1 alpha chain and 1 beta chain of IGF1R. In addition to binding insulin, the insulin receptor can bind insulin-like growth factors (IGFI and IGFII). Isoform Short of INSR has a higher affinity for IGFII binding. When present in a hybrid receptor with IGF1R, INSR binds IGF1.



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