

## Recombinant Human INSR protein, His-tagged

**Cat. No.** INSR-29H    **Lot. No.** (See product label)

### SPECIFICATION

|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b>     | Recombinant Human INSR (His28-Lys944) protein was fused to His-tag at C-terminus and expressed in human 293 cells (HEK293).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Species</b>              | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Source</b>               | HEK293                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>ProteinLength</b>        | His28-Lys944                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Description</b>          | <p>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 IGFI). Isoform Short of INSR has a higher affinity for IGFI binding. When present in a hybrid receptor with IGF1R, INSR binds IGF1.</p> |
| <b>Predicted N Terminal</b> | His28                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Form</b>                 | Lyophilized from 0.22 µm filtered solution in PBS, pH7.4, 10% trehalose.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Molecular Mass</b>       | The protein has a calculated MW of 106.5 kDa. The protein migrates as 115-125 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

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|                       |                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Endotoxin</b>      | Less than 1.0 EU per µg by the LAL method.                                                                                                                                                                                                                                                                                                                      |
| <b>Purity</b>         | >90% as determined by SDS-PAGE.                                                                                                                                                                                                                                                                                                                                 |
| <b>Storage</b>        | <p>For long term storage, the product should be stored at lyophilized state at -20 centigrade or lower.</p> <p>Please avoid repeated freeze-thaw cycles.</p> <p>This product is stable after storage at:</p> <p>-20 to -70 centigrade for 12 months in lyophilized state;</p> <p>-70 centigrade for 3 months under sterile conditions after reconstitution.</p> |
| <b>Reconstitution</b> | <p>It is recommended that sterile water be added to the vial to prepare a stock solution of 0.2 ug/ul. Centrifuge the vial at 4°C before opening to recover the entire contents.</p>                                                                                                                                                                            |

## GENE INFORMATION

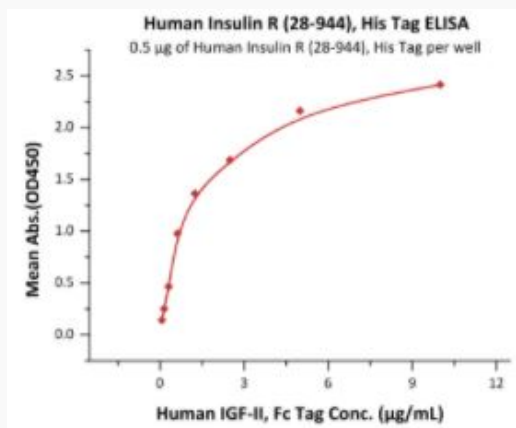
|                        |                                         |
|------------------------|-----------------------------------------|
| <b>Gene Name</b>       | INSR                                    |
| <b>Official Symbol</b> | INSR                                    |
| <b>Synonyms</b>        | INSR; insulin receptor; CD220; IR; HHF5 |
| <b>Gene ID</b>         | 3643                                    |
| <b>mRNA Refseq</b>     | NM_000208                               |
| <b>Protein Refseq</b>  | NP_000199                               |
| <b>MIM</b>             | 147670                                  |
| <b>UniProt ID</b>      | P06213                                  |

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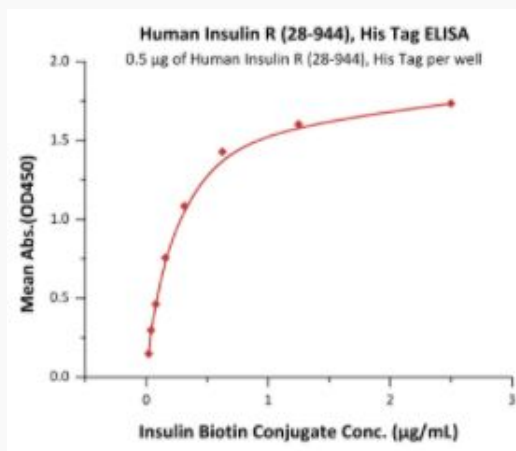
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### Bioactivity-ELISA of INSR-29H



Immobilized Human Insulin R (28-944), His Tag at 5 µg/mL (100 µL/well) can bind Human IGF-II, Fc Tag with a linear range of 0.078-1.25 µg/mL (QC tested).

### Bioactivity-ELISA



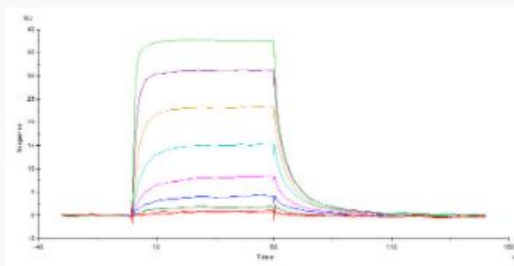
Immobilized Human Insulin R (28-944), His Tag at 5 µg/mL (100 µL/well) can bind Insulin Biotin Conjugate with a linear range of 0.02-0.313 µg/mL (Routinely tested).

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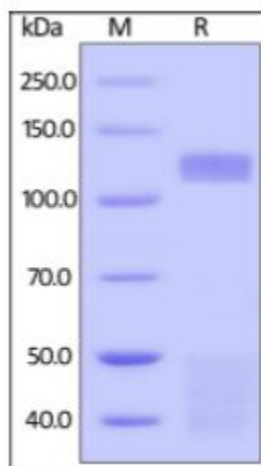
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### Bioactivity-SPR of INSR-29H



Human Insulin R (28-944), His Tag captured on CM5 chip via anti-His antibody, can bind Human Insulin with an affinity constant of 249 nM as determined in a SPR assay (Biacore T200) (QC tested).

### SDS-PAGE of INSR- 29H



Human Insulin R (28-944), His Tag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 90%.