

Active Recombinant Human INSR Protein (Long Isoform) (Met1-Lys956), His-tagged, Biotinylated

Cat. No. INSR-497H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human INSR Protein (NP_000199.2) (Met1-Lys956) (Long Isoform) was produced by HEK293 Cells expression system. This protein was fused with a polyhistidine tag at the C-terminus. The purified protein was biotinylated in vitro.
Species	Human
Source	HEK293
ProteinLength	Met1-Lys956
Description	INSR (Insulin receptor), also known as CD22, is a transmembrane receptor that is activated by insulin. INSR belongs to the protein kinase superfamily, and exists as a tetramer consisting of two alpha subunits and two beta subunits linked by disulfide bonds. The alpha and beta subunits are encoded by a single INSR gene, and the beta subunits pass through the cellular membrane. As the receptor for insulin with tyrosine-protein kinase activity, INSR associates with downstream mediators upon binding to insulin, including IRS1 (insulin receptor substrate 1) and phosphatidylinositol 3'-kinase (PI3K). IRS-1 binding and phosphorylation eventually leads to an increase in the high affinity glucose transporter (Glut4) molecules on the outer membrane of insulin-responsive tissues. INSR isoform long and isoform short are expressed in the peripheral nerve, kidney, liver, striated muscle, fibroblasts and skin, and is found as a hybrid receptor with IGF1R which also binds IGF1 in muscle, heart, kidney, adipose tissue, skeletal muscle, hepatoma, fibroblasts, spleen and

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

placenta. Defects in Insulin Receptor/INSR are the cause of Rabson-Mendenhall syndrome (Mendenhall syndrome), insulin resistance (Ins resistance), leprechaunism (Donohue syndrome), and familial hyperinsulinemic hypoglycemia 5 (HHF5). It may also be associated with noninsulin-dependent diabetes mellitus (NIDDM).

Predicted N Terminal	His 28 & Ser 763
Form	Lyophilized from sterile PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization.
Bio-activity	Measured by its ability to bind human Insulin in a functional ELISA.
Molecular Mass	The recombinant human INSR isoform long consists of 940 amino acids and predicts a molecular mass of 107 kDa.
Endotoxin	< 1.0 EU per µg protein as determined by the LAL method.
Purity	> 95 % as determined by SDS-PAGE.
Stability	Samples are stable for up to twelve months from date of receipt at -70 centigrade.
Storage	Store it under sterile conditions at -20 centigrade to -80 centigrade. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Reconstitution	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.2 mg/ml. Centrifuge the vial at 4°C before opening to recover the entire contents.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature.

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Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Conjugation Biotin

GENE INFORMATION

Gene Name INSR insulin receptor [Homo sapiens]

Official Symbol INSR

Synonyms INSR; insulin receptor; CD220; IR; HHF5;

Gene ID 3643

mRNA Refseq NM_000208

Protein Refseq NP_000199

MIM 147670

UniProt ID P06213

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