

insulin R β (C-19): sc-711

BACKGROUND

The insulin receptor (IR) is a heterodimeric protein complex that has an intracellular β subunit and an extracellular α subunit, which is disulfide-linked to a transmembrane segment. The insulin ligand binds to the IR and initiates molecular signaling pathways that promote glucose uptake in cells and glycogen synthesis. Insulin binding to IR induces phosphorylation of intra-cellular tyrosine kinase domains and recruitment of multiple SH2 and SH3 domain-containing intracellular proteins that serve as signaling intermediates for pleiotropic effects of Insulin. The human Insulin receptor gene maps to chromosome 19p13.2 and encodes a 1,382 amino acid protein that cleaves apart to form α and β subunits. Type 1 diabetes is an auto-immune condition of the endocrine pancreas that results in destruction of Insulin secreting cells and a progressive loss in Insulin-sensitive glucose uptake by cells. Type 2 diabetes is a condition where cells become resistant to Insulin action.

CHROMOSOMAL LOCATION

Genetic locus: INSR (human) mapping to 19p13.2; Insr (mouse) mapping to 8 A1.1.

SOURCE

insulin R β (C-19) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of Insulin R β of human origin.

PRODUCT

Each vial contains 100 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-711 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as agarose conjugate for immunoprecipitation, sc-711 AC, 500 μ g/0.25 ml agarose in 1 ml; and as HRP conjugate for Western Blotting, sc-711 HRP, 200 μ g/1 ml.

APPLICATIONS

insulin R β (C-19) is recommended for detection of Insulin R β of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

insulin R β (C-19) is also recommended for detection of Insulin R β in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for insulin R siRNA (h): sc-29370, insulin R siRNA (m): sc-35673, insulin R shRNA Plasmid (h): sc-29370-SH, insulin R shRNA Plasmid (m): sc-35673-SH, insulin R shRNA (h) Lentiviral Particles: sc-29370-V and insulin R shRNA (m) Lentiviral Particles: sc-35673-V.

Molecular Weight of insulin R β precursor: 200 kDa.

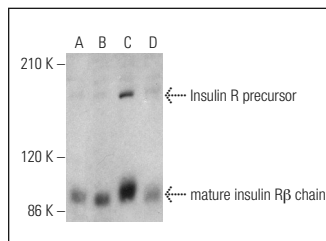
Molecular Weight of mature insulin R β chain: 95 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, 3T3-L1 cell lysate: sc-2243 or NIH/3T3 whole cell lysate: sc-2210.

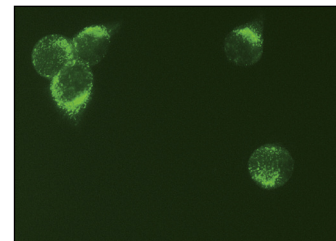
STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



insulin R β (C-19) HRP: sc-711 HRP. Direct western blot analysis of insulin R β expression in NIH/3T3 (A), HeLa (B), Hep G2 (C) and 3T3-L1 (D) whole cell lysates.



insulin R β (C-19): sc-711. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing membrane and some cytoplasmic staining.

SELECT PRODUCT CITATIONS

- Elchebly, M., et al. 1999. Increased Insulin sensitivity and obesity resistance in mice lacking the protein tyrosine phosphatase-1B gene. *Science* 283: 1544-1548.
- Sadahiho, M., et al. 2015. Role of VGF-derived carboxy-terminal peptides in energy balance and reproduction: analysis of 'humanized' knockin mice expressing full-length or truncated VGF. *Endocrinology* 156: 1724-1738.
- Palacios-Ortega, S., et al. 2015. Effect of TNF- α on caveolin-1 expression and insulin signaling during adipocyte differentiation and in mature adipocytes. *Cell. Physiol. Biochem.* 36: 1499-1516.
- Pickard, A., et al. 2015. HPV16 down-regulates the insulin-like growth factor binding protein 2 to promote epithelial invasion in organotypic cultures. *PLoS Pathog.* 11: e1004988.
- Gontier, G., et al. 2015. Blocking IGF signaling in adult neurons alleviates Alzheimer's disease pathology through amyloid- β clearance. *J. Neurosci.* 35: 11500-11513.
- Oliveira, V., et al. 2015. Diets containing α -linolenic (ω 3) or oleic (ω 9) fatty acids rescues obese mice from insulin resistance. *Endocrinology* 156: 4033-4046.
- Pagesy, P., et al. 2016. Effect of insulin analogues on phosphatidylinositol-3 kinase/Akt signalling in INS-1 rat pancreatic derived β -cells. *Arch. Physiol. Biochem.* 122: 54-60.

RESEARCH USE

For research use only, not for use in diagnostic procedures.



Try **insulin R β (CT-3): sc-57342** or **insulin R β (C-4): sc-373975**, our highly recommended monoclonal alternatives to insulin R β (C-19). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **insulin R β (CT-3): sc-57342**.