**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 intracellular 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 Rβ (29B4) is a mouse monoclonal antibody mapping to an intracellular region of the 95 kDa β chain of the human Insulin receptor.

**PRODUCT**

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

**APPLICATIONS**

insulin Rβ (29B4) is recommended for detection of Insulin Rβ chain of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and kinase assay.


Molecular Weight of Insulin R precursor: 200 kDa.

Molecular Weight of mature Insulin Rβ chain: 95 kDa.

**STORAGE**

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

**RESEARCH USE**

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

**DATA**

Western blot analysis of insulin Rβ expression in Hep G2 whole cell lysate immunoprecipitated with insulin Rβ (29B4): sc-09 and detected with insulin Rβ (C-19): sc-711.

**SELECT PRODUCT CITATIONS**


**CONJUGATES**

See insulin Rβ (CT-3): sc-57342 for insulin Rβ antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.

See insulin Rβ (29B4): sc-09 for insulin Rβ antibody conjugates.