

# p-insulin R $\beta$ (21G12): sc-81501

## BACKGROUND

The Insulin receptor (insulin R) is a heterodimeric protein complex that has an intracellular  $\beta$  subunit and an extracellular  $\alpha$  subunit, which is disulfide-linked to a transmembrane segment. The Insulin ligand binds to Insulin R and initiates molecular signaling pathways that promote glucose uptake in cells and, ultimately, glycogen synthesis. Insulin binding to Insulin R induces phosphorylation of intracellular tyrosine kinase domains and recruitment of multiple SH2 and SH3 domain-containing intracellular proteins that serve as signaling intermediates for the pleiotropic effects of Insulin. The human Insulin R gene encodes a 1,382 amino acid protein that cleaves apart to form  $\alpha$  and  $\beta$  subunits. Human Insulin R may be phosphorylated on specific amino acid residues, such as Tyr 1322.

## REFERENCES

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- LocusLink Report (LocusID: 3643). <http://www.ncbi.nlm.nih.gov/LocusLink/>

## CHROMOSOMAL LOCATION

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

## SOURCE

p-insulin R $\beta$  (21G12) is a mouse monoclonal antibody raised against phosphopeptide corresponding to amino acid residues surrounding Tyr 1322 of Insulin R $\beta$  of human origin.

## PRODUCT

Each vial contains 50  $\mu$ g IgG<sub>1</sub> in 0.5 ml PBS with < 0.1% sodium azide, 1% gelatin, PEG and sucrose.

## STORAGE

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

## APPLICATIONS

p-insulin R $\beta$  (21G12) is recommended for detection of Tyr 1322 phosphorylated Insulin R $\beta$  of mouse, rat, human and canine origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)].

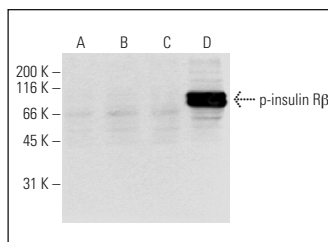
Suitable for use as control antibody for Insulin R siRNA (h): sc-29370, Insulin R siRNA (m): sc-35673, Insulin R shRNA Plasmid (h): sc-29370-SH, Insulin R shRNA Plasmid (m): sc-35673-SH, Insulin R shRNA (h) Lentiviral Particles: sc-29370-V and Insulin R shRNA (m) Lentiviral Particles: sc-35673-V.

Molecular Weight of p-insulin R precursor: 200 kDa.

Molecular Weight of mature p-insulin R $\beta$  chain: 95 kDa.

Positive Controls: pervanadate-treated MDA-MB-231 whole cell lysate.

## DATA



p-insulin R $\beta$  (21G12): sc-81501. Western blot analysis of insulin R $\beta$  phosphorylation in untreated (A), insulin-treated (B), IGF1-treated (C) and Pervanadate-treated (D) MDA-MB-231 whole cell lysates.

## SELECT PRODUCT CITATIONS

- Gayen, M., Benoit, M.R., Fan, Q., Hudobenko, J. and Yan, R. 2022. The CX3CL1 intracellular domain exhibits neuroprotection via Insulin receptor/Insulin like growth factor receptor signaling. *J. Biol. Chem.* E-published.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.