

IRS-2 (A-19): sc-1556

BACKGROUND

IRS-2, originally described as 4PS, acts as a signaling intermediate downstream of the Insulin, IGF-1, IL-4, IL-9 and IL-13 receptors. In IRS-2-deficient mice, reduction in total PI 3-kinase activity by 30% and abolition of downstream activation of protein kinase C (PKC) ζ leads to the development of type 2 diabetes. Additionally, reconstitution with retroviral IRS-2 restores IRS-2/PI 3-kinase/PKC ζ signalling as well as glucose uptake. IRS-2 translocates to the nuclei of mouse embryo fibroblasts expressing the Insulin-like growth factor 1 receptor. Various mutations in the IGF-IR can result in an abrogation of or decrease in the translocation of IRS proteins to the nucleoli. IRS-2 is responsible for mitogen-activated protein kinase (MAPK) and protein kinase B (PKB) activation by Insulin and is the major adapter molecule linking the Insulin receptor to this step.

CHROMOSOMAL LOCATION

Genetic locus: *Irs2* (mouse) mapping to 8 A1.1.

SOURCE

IRS-2 (A-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of IRS-2 of mouse origin.

PRODUCT

Each vial contains 200 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-1556 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

RS-2 (A-19) is recommended for detection of IRS-2 of mouse and rat 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for IRS-2 siRNA (m): sc-35714, IRS-2 siRNA (r): sc-155988, IRS-2 shRNA Plasmid (m): sc-35714-SH, IRS-2 shRNA Plasmid (r): sc-155988-SH, IRS-2 shRNA (m) Lentiviral Particles: sc-35714-V and IRS-2 shRNA (r) Lentiviral Particles: sc-155988-V.

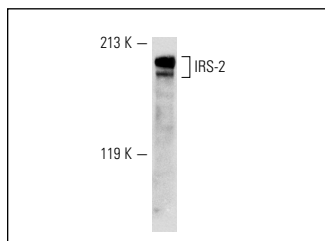
Molecular Weight of IRS-2: 165-185 kDa.

Positive Controls: 3T3-L1 cell lysate: sc-2243.

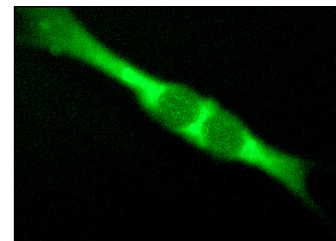
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



IRS-2 (A-19): sc-1556. Western blot analysis of IRS-2 expression in 3T3-L1 whole cell lysate.



IRS-2 (A-19): sc-1556. Immunofluorescence staining of methanol-fixed 3T3-L1 cells showing cytoplasmic staining.

SELECT PRODUCT CITATIONS

1. Thirone, A.C., et al. 1999. Growth hormone stimulates the tyrosine kinase activity of JAK2 and induces tyrosine phosphorylation of Insulin receptor substrates and Shc in rat tissues. *Endocrinology* 140: 55-62.
2. Pelegrinelli, F.F., et al. 2001. Early steps of Insulin action in the skin of intact rats. *J. Invest. Dermatol.* 117: 971-976.
3. Zecchin, H.G., et al. 2003. Insulin signalling pathways in aorta and muscle from two animal models of Insulin resistance—the obese middle-aged and the spontaneously hypertensive rats. *Diabetologia* 46: 479-491.
4. Kiss, J., et al. 2006. Glutamatergic innervation of growth hormone-releasing hormone-containing neurons in the hypothalamic arcuate nucleus and somatostatin-containing neurons in the anterior periventricular nucleus of the rat. *Brain Res. Bull.* 70: 278-288.

RESEARCH USE

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


 MONOS
Satisfaction
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Try **IRS-2 (B-5): sc-390761**, our highly recommended monoclonal alternative to IRS-2 (A-19). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **IRS-2 (B-5): sc-390761**.