

IRS-2 (M-19): sc-1555

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 (human) mapping to 13q34; Irs2 (mouse) mapping to 8 A1.1.

SOURCE

IRS-2 (M-19) is available as either goat (sc-1555) or rabbit (sc-1555-R) polyclonal affinity purified antibody raised against a peptide mapping at the C-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-1555 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

IRS-2 (M-19) is recommended for detection of IRS-2 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

IRS-2 (M-19) is also recommended for detection of IRS-2 in additional species, including equine and canine.

Suitable for use as control antibody for IRS-2 siRNA (h): sc-29378, IRS-2 siRNA (m): sc-35714, IRS-2 shRNA Plasmid (h): sc-29378-SH, IRS-2 shRNA Plasmid (m): sc-35714-SH, IRS-2 shRNA (h) Lentiviral Particles: sc-29378-V and IRS-2 shRNA (m) Lentiviral Particles: sc-35714-V.

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

Positive Controls: HeLa whole cell lysate: sc-2200, BJAB whole cell lysate: sc-2207 or Raji whole cell lysate: sc-364236

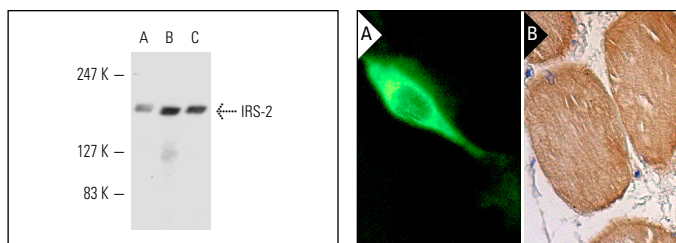
STORAGE

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



IRS-2 (M-19)-R: sc-1555-R. Western blot analysis of IRS-2 expression in BJAB (A), HeLa (B) and Raji (C) whole cell lysates.

IRS-2 (M-19): sc-1555. Immunofluorescence staining of methanol-fixed 3T3-L1 cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human skeletal muscle tissue showing cytoplasmic staining of myocytes (B).

SELECT PRODUCT CITATIONS

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- Stoppa, G.R., et al. 2008. Intracerebroventricular injection of citrate inhibits hypothalamic AMPK and modulates feeding behavior and peripheral Insulin signaling. J. Endocrinol. 198: 157-168.
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- Xu, L., et al. 2013. MicroRNA-7-regulated TLR9 signaling-enhanced growth and metastatic potential of human lung cancer cells by altering the phosphoinositide-3-kinase, regulatory subunit 3/Akt pathway. Mol. Biol. Cell 24: 42-55.
- Petrov, D., et al. 2015. High-fat diet-induced deregulation of hippocampal Insulin signaling and mitochondrial homeostasis deficiencies contribute to Alzheimer disease pathology in rodents. Biochim. Biophys. Acta 1852: 1687-1699.

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