IRS-3 (A-19): sc-8188



The Power to Question

BACKGROUND

Insulin receptor substrate (IRS) proteins play important roles in Insulin action and pancreatic beta-cell function. IRS-3, identified only in rodents, shows robust and prolonged tyrosine phosphorylation upon Insulin treatment of cells and may play a role in delayed and prolonged Insulin actions. IRS-3 interacts with phosphatidylinositol-3-kinase in adipocytes and hepatoma cells and contains pleckstrin and phosphotyrosine binding domains which are highly homologous to domains in IRS-1 and IRS-2. IRS-3 exhibits an expression pattern which differs from other IRS proteins. During both the embryonic development and adult life of the mouse, p53 inhibits the IRS-3 promoter, while tumor-derived p53 mutants derepress the same promoter. GFP-IRS-3 fusion protein and endogenous rat IRS-3 localize in both the plasma membrane and the nucleus, indicating that intracellular localization of IRS-3 is determined by a different mechanism from other IRS proteins.

REFERENCES

- 1. Lavan, B.E., Lane, W.S. and Lienhard, G.E. 1997. The 60-kDa phosphotyrosine protein in Insulin-treated adipocytes is a new member of the Insulin receptor substrate family. J. Biol. Chem. 272: 11439-11441.
- Choi, W.S. and Sung, C.K. 2000. Characterization of Insulin receptor substrate 3 in rat liver derived cells. Biochem. Biophys. Res. Commun. 272: 953-958.
- Sciacchitano, S., Orecchio, A., Lavra, L., Misiti, S., Giacchini, A., Zani, M., Danese, D., Gurtner, A., Soddu, S., Di Mario, U. and Andreoli, M. 2002. Cloning of the mouse receptor substrate-3 (mIRS-3) promoter, and its regulation by p53. Mol. Endocrinol. 16: 1577-1589.
- Kabuta, T., Hakuno, F., Asano, T. and Takahashi, S. 2002. Insulin receptor substrate-3 functions as transcriptional activator in the nucleus. J. Biol. Chem. 277: 6846-6851.
- Bjornholm, M., He, A.R., Attersand, A., Lake, S., Liu, S.C., Lienhard, G.E., Taylor, S., Arner, P. and Zierath, J.R. 2002. Absence of functional Insulin receptor substrate-3 (IRS-3) gene in humans. Diabetologia 45: 1697-1702.

SOURCE

IRS-3 (A-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of IRS-3 of rat origin.

PRODUCT

Each vial contains 200 μg IgG in 1.0 ml of PBS with <0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-8188 P, (100 μg 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.

RESEARCH USE

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

APPLICATIONS

IRS-3 (A-19) is recommended for detection of IRS-3 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Suitable for use as control antibody for IRS-3 siRNA (m): sc-40974, IRS-3 shRNA Plasmid (m): sc-40974-SH and IRS-3 shRNA (m) Lentiviral Particles: sc-40974-V.

Molecular Weight of IRS-3: 60 kDa.

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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

PROTOCOLS

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

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