

IRS-4 (h): 293T Lysate: sc-176236

BACKGROUND

The Insulin receptor substrate (IRS) proteins are key components in signaling from the Insulin receptor. IRS-4 is the most recently characterized member of the IRS family and has an undefined *in vivo* function. Phosphorylated IRS-4 associates with phosphatidylinositol 3-kinase (PI3-kinase), involved in Insulin-stimulated DNA synthesis, GH-induced tyrosine phosphorylation of IRS-4 and nuclear translocation of STAT5. IRS-4 also associates with IRAS which, when overexpressed, enhances IRS-4-dependent Insulin stimulation of PI3-kinase. The IRS-4 protein exhibits a limited fiber type specific expression in heart and skeletal muscle tissue and has not yet been detected in any mouse or primary human tissue. The absence of IRS-4 in mice causes mild defects in growth, reproduction, and glucose homeostasis, while overexpression of IRS-4 increases basal PI3-kinase activity and Akt phosphorylation. Defects in IRS-4 null mice may result from a lower overall blood glucose concentration.

REFERENCES

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3. Sano, H., Liu, S.C., Lane, W.S., Piletz, J.E. and Lienhard, G.E. 2002. Insulin receptor substrate-4 associates with the protein IRAS. *J. Biol. Chem.* 277: 19439-19447.
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5. Urso, B., Ilondo, M.M., Holst, P.A., Christoffersen, C.T., Ouwens, M., Giorgetti, S., Van Obberghen, E., Naor, D., Tornqvist, H. and De Meyts, P. 2003. IRS-4 mediated mitogenic signalling by Insulin and growth hormone in LB cells, a murine T-cell lymphoma devoid of IGF-1 receptors. *Cell. Signal.* 15: 385-394.

CHROMOSOMAL LOCATION

Genetic locus: IRS4 (human) mapping to Xq22.3.

PRODUCT

IRS-4 (h): 293T Lysate represents a lysate of human IRS-4 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

IRS-4 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive IRS-4 antibodies. Recommended use: 10-20 µl per lane.

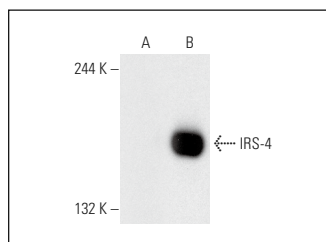
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

IRS-4 (RI-7): sc-100854 is recommended as a positive control antibody for Western Blot analysis of enhanced human IRS-4 expression in IRS-4 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

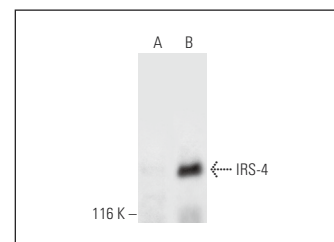
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



IRS-4 (RI-7): sc-100854. Western blot analysis of IRS-4 expression in non-transfected: sc-117752 (A) and human IRS-4 transfected: sc-176236 (B) 293T whole cell lysates.



IRS-4 (C-4): sc-393207. Western blot analysis of IRS-4 expression in non-transfected: sc-117752 (A) and human IRS-4 transfected: sc-176236 (B) 293T whole cell lysates.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

RESEARCH USE

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

PROTOCOLS

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