SANTA CRUZ BIOTECHNOLOGY, INC.

IRRα (D-3): sc-515888

BACKGROUND

The Insulin receptor-related receptor (IRR) is a member of the Insulin receptor tyrosine kinase family, whose ligand, gene regulation and biological function have not been elucidated. IRR shares significant homology with the Insulin and Insulin-like growth factor-1 (IGF-I) receptors, but does not bind to any of their known ligands. IRR is synthesized as a single polypeptide precursor that undergoes proteolytic cleavage and glycosylation to produce α and β subunits. IRRα and IRRβ form a heterotetramer. The two IRRα subunits form the ligand-binding domain, while the two IRRβ subunits contain the kinase domain. IRR is expressed in brain, stomach, pancreas and heart with the highest level of expression in kidney. However, the expression of IRR is selectively distributed within each tissue. The gene encoding IRR maps to human chromosome 1q23.1, a region linked with type-2 diabetes mellitus, which suggests a role for IRR in Insulin regulation.

REFERENCES

1. Jui, H.Y., et al. 1994. Expression of a cDNA encoding the human Insulin receptor-related receptor. J. Biol. Chem. 269: 22446-22452.
2. Mathi, S.K., et al. 1995. Insulin receptor-related receptor messenger ribonucleic acid: quantitative distribution and localization to subpopulations of epithelial cells in stomach and kidney. Endocrinology 136: 4125-4132.
3. Ozaki, K., et al. 1997. Localization of Insulin receptor-related receptor in the rat kidney. Kidney Int. 52: 694-698.
4. Chrysis, D., et al. 1998. Effect of fasting on Insulin receptor-related receptor messenger ribonucleic acid in rat kidney. J. Endocrinol. 159: 9-12.
4. Ozaki, K. 1998. Insulin receptor-related receptor in rat islets of Langerhans. Eur. J. Endocrinol. 139: 244-247.
6. Kitamura, T., et al. 2001. Preserved pancreatic β-cell development and function in mice lacking the Insulin receptor-related receptor. Mol. Cell. Biol. 21: 5624-5630.
7. Wolford, J.K., et al. 2001. Polymorphism screening of the Insulin receptor-related receptor gene (INSRR) on 1q in Pima Indians. Mol. Cell. Probes 15: 223-227.

CHROMOSOMAL LOCATION

Genetic locus: INSRR (human) mapping to 1q23.1; Insrr (mouse) mapping to 3 F1.

SOURCE

IRRα (D-3) is a mouse monoclonal antibody raised against amino acids 619-715 mapping within an internal region of IRR of human origin.

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 for detailed protocols and support products.

PRODUCT

Each vial contains 200 µg IgG_1 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

IRRα (D-3) is available conjugated to agarose (sc-515888 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-515888 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515888 PE), fluorescein (sc-515888 FITC), Alexa Fluor® 488 (sc-515888 AF488), Alexa Fluor® 546 (sc-515888 AF546), Alexa Fluor® 594 (sc-515888 AF594) or Alexa Fluor® 647 (sc-515888 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515888 AF680) or Alexa Fluor® 790 (sc-515888 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

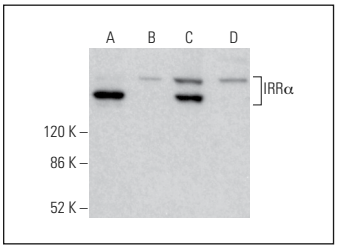
IRRα (D-3) is recommended for detection of IRRα of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for IRRα/β siRNA (h): sc-40081, IRRα/β shRNA Plasmid (h): sc-40081-SH and IRRα/β shRNA (h) Lentiviral Particles: sc-40081-V.

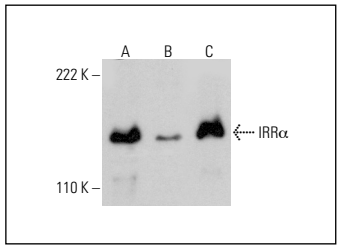
Molecular Weight of IRRα: 108 kDa.

Positive Controls: C6 whole cell lysate: sc-364373, A-10 cell lysate: sc-3806 or PC-12 cell lysate: sc-2250.

DATA



IRRα (D-3): sc-515888. Western blot analysis of IRRα expression in C6 (**A**), M1 (**B**), A-10 (**C**) and PC-12 (**D**) whole cell lysates.



IRRα (D-3): sc-515888. Western blot analysis of IRRα expression in SK-N-SH (**A**), HeLa (**B**) and SH-SY5Y (**C**) whole cell lysates.

RESEARCH USE

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