

## IRR $\alpha$ (A-20): sc-19850

### 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  $\alpha$  and  $\beta$  subunits. IRR $\alpha$  and IRR $\beta$  form a heterotetramer. The two IRR $\alpha$  subunits form the ligand-binding domain, while the two IRR $\beta$  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

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- Ozaki, K., et al. 1997. Localization of Insulin receptor-related receptor in the rat kidney. *Kidney Int.* 52: 694-698.
- Ozaki, K. 1998. Insulin receptor-related receptor in rat islets of Langerhans. *Eur. J. Endocrinol.* 139: 244-247.
- Chrysis, D., et al. 1998. Effect of fasting on Insulin receptor-related receptor messenger ribonucleic acid in rat kidney. *J. Endocrinol.* 159: 9-12.
- Kitamura, T., et al. 2001. Preserved pancreatic  $\beta$ -cell development and function in mice lacking the Insulin receptor-related receptor. *Mol. Cell Biol.* 21: 5624-5630.
- 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

IRR $\alpha$  (A-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of IRR $\alpha$  of human origin.

### PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-19850 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

IRR $\alpha$  (A-20) is recommended for detection of IRR $\alpha$  of mouse, rat and human 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).

IRR $\alpha$  (A-20) is also recommended for detection of IRR $\alpha$  in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for IRR $\alpha$ / $\beta$  siRNA (h): sc-40081, IRR $\alpha$ / $\beta$  siRNA (m): sc-40082, IRR $\alpha$ / $\beta$  shRNA Plasmid (h): sc-40081-SH, IRR $\alpha$ / $\beta$  shRNA Plasmid (m): sc-40082-SH, IRR $\alpha$ / $\beta$  shRNA (h) Lentiviral Particles: sc-40081-V and IRR $\alpha$ / $\beta$  shRNA (m) Lentiviral Particles: sc-40082-V.

Molecular Weight of IRR $\alpha$ : 108 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<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz<sup>™</sup> Mounting Medium: sc-24941.

### 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.

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **IRR (I-63): sc-100303**, our highly recommended monoclonal alternative to IRR $\alpha$  (A-20).