

IRSp53 (H-99): sc-134810

BACKGROUND

The scaffolding protein Insulin receptor tyrosine kinase substrate p53 (IRSp53), a ubiquitous regulator of the actin cytoskeleton, mediates filopodia formation under the control of Rho-family GTPases. It is expressed in the cytoplasm and links small membrane-bound G-proteins to cytoplasmic effector proteins. IRSp53 comprises a central SH3 domain, which binds to proline-rich regions of a wide range of actin regulators, and a conserved N-terminal IRSp53/MIM homology domain (IMD) that harbors F-actin-bundling activity. IRSp53 interacts with atrophin-1, the product of the dentatorubral-pallidolusian atrophy (DRPLA) gene, which is associated with an autosomal dominant neurodegenerative disease. The IRSp53 protein also interacts with ENAH, BAI-1, Eps8, Shank 1, Shank 2, Shank 3, WAVE1, WAVE2, Tiam1 and Dia 1.

REFERENCES

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- Soltau, M., et al. 2002. The insulin receptor substrate IRSp53 links post-synaptic Shank 1 to the small G-protein Cdc42. *Mol. Cell. Neurosci.* 21: 575-583.
- Miyahara, A., et al. 2003. Genomic structure and alternative splicing of the insulin receptor tyrosine kinase substrate of 53 kDa protein. 48: 410-414.
- Funato, Y., et al. 2004. IRSp53/Eps8 complex is important for positive regulation of Rac and cancer cell motility/invasiveness. *Cancer Res.* 64: 5237-5244.
- Choi, J., et al. 2005. Regulation of dendritic spine morphogenesis by insulin receptor substrate 53, a downstream effector of Rac1 and Cdc42 small GTPases. *J. Neurosci.* 25: 869-879.
- Connolly, B.A., et al. 2005. Tiam1-IRSp53 complex formation directs specificity of Rac-mediated actin cytoskeleton regulation. *Mol. Cell. Biol.* 25: 4602-4614.

CHROMOSOMAL LOCATION

Genetic locus: BAIAP2 (human) mapping to 17q25.3; Baiap2 (mouse) mapping to 11 E2.

SOURCE

IRSp53 (H-99) is a rabbit polyclonal antibody raised against amino acids 42-140 mapping near the N-terminus of IRSp53 of human origin.

PRODUCT

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

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

IRSp53 (H-99) is recommended for detection of IRSp53 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

IRSp53 (H-99) is also recommended for detection of IRSp53 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for IRSp53 siRNA (h): sc-60863, IRSp53 siRNA (m): sc-60864, IRSp53 shRNA Plasmid (h): sc-60863-SH, IRSp53 shRNA Plasmid (m): sc-60864-SH, IRSp53 shRNA (h) Lentiviral Particles: sc-60863-V and IRSp53 shRNA (m) Lentiviral Particles: sc-60864-V.

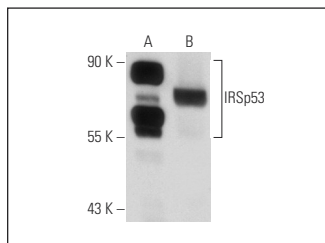
Molecular Weight of IRSp53: 53 kDa.

Positive Controls: mouse brain extract: sc-2253, K-562 whole cell lysate: sc-2203 or mouse testis extract: sc-2405.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



IRSp53 (H-99): sc-134810. Western blot analysis of IRSp53 expression in mouse brain (A) and mouse testis (B) tissue extracts.

RESEARCH USE

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



Try **IRSp53 (46): sc-136470**, our highly recommended monoclonal alternative to IRSp53 (H-99).