

# Spir-1 (F-15): sc-85161

## BACKGROUND

Spir-1 (spire homolog 1) is a 756 amino acid protein that localizes to the cytoskeleton, as well as to the perinuclear region of the cytoplasm, and contains one KIND domain and 2 WH2 domains. Functioning as an actin nucleation factor, Spir-1 assists in new filament growth and is involved in vesicle transport processes, effectively providing a link between intracellular transport and actin organization. Multiple isoforms of Spir-1 exist due to alternative splicing events. The gene encoding Spir-1 maps to human chromosome 18, which houses over 300 protein-coding genes and contains nearly 76 million bases. There are a variety of diseases associated with defects in chromosome 18-localized genes, some of which include Trisomy 18 (also known as Edwards syndrome), Niemann-Pick disease, hereditary hemorrhagic telangiectasia, erythropoietic protoporphyria and follicular lymphomas.

## REFERENCES

1. Hirosawa, M., et al. 1999. Characterization of cDNA clones selected by the GeneMark analysis from size-fractionated cDNA libraries from human brain. *DNA Res.* 6: 329-336.
2. Kerkhoff, E., et al. 2001. The Spir actin organizers are involved in vesicle transport processes. *Curr. Biol.* 11: 1963-1968.
3. Schumacher, N., et al. 2004. Overlapping expression pattern of the actin organizers Spir-1 and formin-2 in the developing mouse nervous system and the adult brain. *Gene Expr. Patterns* 4: 249-255.
4. Benzinger, A., et al. 2005. Targeted proteomic analysis of 14-3-3  $\alpha$ , a p53 effector commonly silenced in cancer. *Mol. Cell. Proteomics* 4: 785-795.
5. Quinlan, M.E., et al. 2005. *Drosophila* Spire is an actin nucleation factor. *Nature* 433: 382-388.
6. Online Mendelian Inheritance in Man, OMIM™. 2005. Johns Hopkins University, Baltimore, MD. MIM Number: 609216. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

## CHROMOSOMAL LOCATION

Genetic locus: SPIRE1 (human) mapping to 18p11.21; Spire1 (mouse) mapping to 18 E1.

## SOURCE

Spir-1 (F-15) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of Spir-1 of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-85161 P, (100  $\mu$ g 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.

## APPLICATIONS

Spir-1 (F-15) is recommended for detection of Spir-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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).

Spir-1 (F-15) is also recommended for detection of Spir-1 in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for Spir-1 siRNA (h): sc-76567, Spir-1 siRNA (m): sc-153771, Spir-1 shRNA Plasmid (h): sc-76567-SH, Spir-1 shRNA Plasmid (m): sc-153771-SH, Spir-1 shRNA (h) Lentiviral Particles: sc-76567-V and Spir-1 shRNA (m) Lentiviral Particles: sc-153771-V.

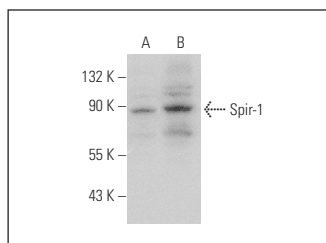
Molecular Weight of Spir-1: 86 kDa.

Positive Controls: HEK293 whole cell lysate: sc-45136 or U-251-MG whole cell lysate: sc-364176.

## 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



Spir-1 (F-15): sc-85161. Western blot analysis of Spir-1 expression in U-251-MG (A) and HEK293 (B) whole cell lysates.

## RESEARCH USE

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

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Try **Spir-1 (4C5): sc-517039** or **Spir-1 (H-1): sc-515448**, our highly recommended monoclonal alternatives to Spir-1 (F-15).