

# SPIN90 (S-17): sc-79103

## BACKGROUND

SPIN90 (also known as NCK-interacting protein with SH3 domain, diaphanous protein-interacting protein DIP-1) is a 722 amino acid protein encoded by the human gene SPIN90. SPIN90 is a nuclear protein containing an SH3 domain, a proline-rich domain and a bipartite nuclear localization signal. The SH3 domain of SPIN90 has high homology with that of Fyn. SPIN90 plays an important role in stress fiber formation induced by active diaphanous protein homolog 1 (DRF1) and can induce microspike formation *in vivo*. SPIN90 facilitates the assembly of myofibrils into sarcomeres and mediates the maintenance of these sarcomeres. It is also believed to regulate Actin polymerization and cell adhesion. A chromosomal aberration involving SPIN90/AF3p21 is found in therapy-related leukemia involving a translocation at t(3;11)(p21;q23) with MLL. This occurs when intron 6 of the mixed lineage leukemia (MLL) gene is fused at a point upstream of exon 1 in the AF3p21 gene and the chromosome forms an MLL-AF3p21 fusion transcript in leukemic cells. The MLL gene is frequently rearranged in leukemia, especially in infantile leukemia and therapy-related leukemia. The MLL gene is localized at chromosome 11q23, and is involved in almost all of the chromosomal translocations involving 11q23.

## REFERENCES

1. Sano, K. 2001. Structure of AF3p21, a new member of mixed lineage leukemia (MLL) fusion partner proteins-implication for MLL-induced leukemogenesis. *Leuk. Lymphoma* 42: 595-602.
2. Kim, Y., Kim, S., Lee, S., Kim, S.H., Kim, Y., Park, Z.Y., Song, W.K. and Chang, S. 2005. Interaction of SPIN90 with Dynamin I and its participation in synaptic vesicle endocytosis. *J. Neurosci.* 25: 9515-9523.
3. García, A., Senis, Y.A., Antrobus, R., Hughes, C.E., Dwek, R.A., Watson, S.P. and Zitzmann, N. 2006. A global proteomics approach identifies novel phosphorylated signaling proteins in GPVI-activated platelets: involvement of G6f, a novel platelet GRB2-binding membrane adapter. *Proteomics* 6: 5332-5343.
4. Lee, S., Lee, K., Hwang, S., Kim, S.H., Song, W.K., Park, Z.Y. and Chang, S. 2006. SPIN90/WISH interacts with PSD-95 and regulates dendritic spino-genesis via an N-WASP-independent mechanism. *EMBO J.* 25: 4983-4995.
5. Kim, S.H., Choi, H.J., Lee, K.W., Hong, N.H., Sung, B.H., Choi, K.Y., Kim, S.M., Chang, S., Eom, S.H. and Song, W.K. 2006. Interaction of SPIN90 with syndapin is implicated in clathrin-mediated endocytic pathway in fibroblasts. *Genes Cells* 11: 1197-1211.
6. Kim, D.J., Kim, S.H., Kim, S.M., Bae, J.I., Ahn, J. and Song, W.K. 2007. F-Actin binding region of SPIN90 C-terminus is essential for Actin polymerization and lamellipodia formation. *Cell Commun. Adhes.* 14: 33-43.
7. Kim, Y. and Chang, S. 2007. Ever-expanding network of Dynamin-interacting proteins. *Mol. Neurobiol.* 34: 129-136.

## CHROMOSOMAL LOCATION

Genetic locus: NCKIPSD (human) mapping to 3p21.31; Spin90 (mouse) mapping to 9 F2.

## SOURCE

SPIN90 (S-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SPIN90 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.

Blocking peptide available for competition studies, sc-79103 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

SPIN90 (S-17) is recommended for detection of SPIN90 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).

SPIN90 (S-17) is also recommended for detection of SPIN90 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for SPIN90 siRNA (h): sc-76563, SPIN90 siRNA (m): sc-76564, SPIN90 shRNA Plasmid (h): sc-76563-SH, SPIN90 shRNA Plasmid (m): sc-76564-SH, SPIN90 shRNA (h) Lentiviral Particles: sc-76563-V and SPIN90 shRNA (m) Lentiviral Particles: sc-76564-V.

Molecular Weight of SPIN90: 80 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132 or JAR cell lysate: sc-2276.

## 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™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) 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™ 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.