

# SPIN90 (B-3): sc-377405

## 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., et al. 2005. Interaction of SPIN90 with dynamin I and its participation in synaptic vesicle endocytosis. *J. Neurosci.* 25: 9515-9523.
3. García, A., et al. 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., et al. 2006. SPIN90/WISH interacts with PSD-95 and regulates dendritic spinogenesis via an N-WASP-independent mechanism. *EMBO J.* 25: 4983-4995.
5. Kim, S.H., et al. 2006. Interaction of SPIN90 with syndapin is implicated in clathrin-mediated endocytic pathway in fibroblasts. *Genes Cells* 11: 1197-1211.
6. Kim, Y., et al. 2006. Ever-expanding network of dynamin-interacting proteins. *Mol. Neurobiol.* 34: 129-136.
7. Kim, D.J., et al. 2007. F-Actin binding region of SPIN90 C-terminus is essential for Actin polymerization and lamellipodia formation. *Cell Commun. Adhes.* 14: 33-43.

## CHROMOSOMAL LOCATION

Genetic locus: NCKIPSD (human) mapping to 3p21.31.

## SOURCE

SPIN90 (B-3) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of SPIN90 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

SPIN90 (B-3) is recommended for detection of SPIN90 of 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 SPIN90 siRNA (h): sc-76563, SPIN90 shRNA Plasmid (h): sc-76563-SH and SPIN90 shRNA (h) Lentiviral Particles: sc-76563-V.

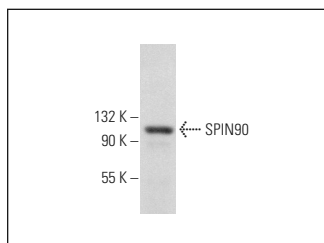
Molecular Weight of SPIN90: 80 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132, JAR cell lysate: sc-2276 or human brain tissue extract.

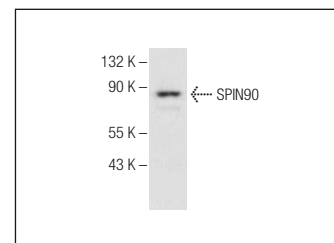
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



SPIN90 (B-3): sc-377405. Western blot analysis of SPIN90 expression in human brain tissue extract.



SPIN90 (B-3): sc-377405. Western blot analysis of SPIN90 expression in Jurkat nuclear extract.

## 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.