SANTA CRUZ BIOTECHNOLOGY, INC.

SPIN90 (2614C1a): sc-81383

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 spinogenesis 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., Ahnn, 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.

CHROMOSOMAL LOCATION

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

SOURCE

SPIN90 (2614C1a) is a mouse monoclonal antibody raised against a recombinant protein corresponding to an internal region of SPIN90 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

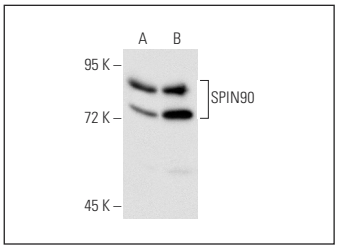
SPIN90 (2614C1a) is recommended for detection of SPIN90 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

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: SPIN90 (m): 293T Lysate: sc-123746 Jurkat nuclear extract: sc-2132 or JAR cell lysate: sc-2276.

DATA



SPIN90 (2614C1a): sc-81383. Western blot analysis of SPIN90 expression in non-transfected: sc-117752 (**A**) and mouse SPIN90 transfected: sc-123746 (**B**) 293T whole cell lysates.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.