

N-WASP (m): 293T Lysate: sc-121912

BACKGROUND

The Wiskott-Aldrich syndrome (WAS) is characterized by thrombocytopenia, eczema, defects in cell-mediated and humoral immunity, and a propensity for lymphoproliferative diseases. The syndrome is the result of a mutation in the gene encoding a proline-rich protein termed WASP. WASP and the related protein neural-WASP (or N-WASP) are downstream effectors of Cdc42. Both WASP and N-WASP are implicated in Actin polymerization and cytoskeletal organization, and N-WASP is also essential for mediating the Cdc42-induced formation of filopodia. WASP is primarily expressed in hematopoietic cells, whereas N-WASP is richest in neural tissues and is also expressed ubiquitously. The effects of Cdc42-stimulated Actin assembly require the interaction of WASP/N-WASP with the Arp2/3 complex, which dramatically enhances polymerization. The WASP and N-WASP proteins characteristically contain a pleckstrin homology (PH) domain, which binds phosphatidylinositol bisphosphate (PIP₂); a Cdc42-binding domain; and a 70 amino acid conserved verprolin-homology (VPH) domain, which is the Actin-binding region and is critical to the regulation of the Actin cytoskeleton.

REFERENCES

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3. Symons, M., Derry, J.M., Karlak, B., Jiang, S., Lemahieu, V., McCormick, F., Francke, U. and Abo, A. 1996. Wiskott-Aldrich syndrome protein, a novel effector for the GTPase Cdc42Hs, is implicated in Actin polymerization. *Cell* 84: 723-734.
4. Miki, H., Miura, K. and Takenawa, T. 1996. N-WASP, a novel Actin-depolymerizing protein, regulates the cortical cytoskeletal rearrangement in a PIP₂-dependent manner downstream of tyrosine kinases. *EMBO J.* 15: 5326-5335.
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6. Miki, H. and Takenawa, T. 1998. Direct binding of the verprolin-homology domain in N-WASP to Actin is essential for cytoskeletal reorganization. *Biochem. Biophys. Res. Commun.* 243: 73-78.
7. Rohatgi, R., Ma, L., Miki, H., Lopez, M., Kirchhausen, T., Takenawa, T. and Kirschner, M.W. 1999. The interaction between N-WASP and the Arp2/3 complex links Cdc42-dependent signals to Actin assembly. *Cell* 97: 221-231.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: Wasl (mouse) mapping to 6 A3.1.

PRODUCT

N-WASP (m): 293T Lysate represents a lysate of mouse N-WASP transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

N-WASP (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive N-WASP antibodies. Recommended use: 10-20 µl per lane.

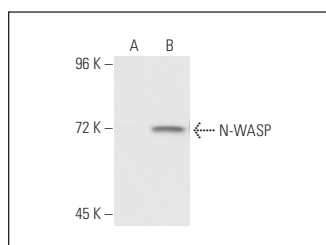
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

N-WASP (93-W): sc-100964 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse N-WASP expression in N-WASP transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

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.

DATA



N-WASP (93-W): sc-100964. Western blot analysis of N-WASP expression in non-transfected: sc-117752 (A) and mouse N-WASP transfected: sc-121912 (B) 293T whole cell lysates.

RESEARCH USE

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