SANTA CRUZ BIOTECHNOLOGY, INC.

N-WASP (93-W): sc-100964

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.

CHROMOSOMAL LOCATION

Genetic locus: WASL (human) mapping to 7q31.32; Wasl (mouse) mapping to 6 A3.1.

SOURCE

N-WASP (93-W) is a mouse monoclonal antibody raised against recombinant N-WASP of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

N-WASP (93-W) is recommended for detection of N-WASP of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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 N-WASP siRNA (h): sc-36006, N-WASP siRNA (m): sc-36007, N-WASP shRNA Plasmid (h): sc-36006-SH, N-WASP shRNA Plasmid (m): sc-36007-SH, N-WASP shRNA (h) Lentiviral Particles: sc-36006-V and N-WASP shRNA (m) Lentiviral Particles: sc-36007-V.

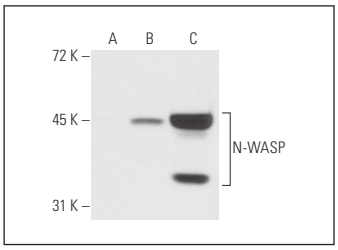
Molecular Weight of N-WASP: 65 kDa.

Positive Controls: N-WASP (m): 293T lysate: sc-121912, SK-N-SH cell lysate: sc-2410 or U-87 MG cell lysate: sc-2411.

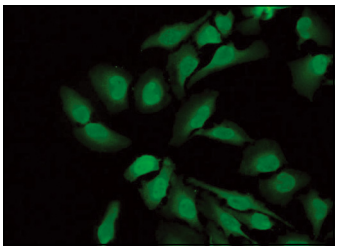
RECOMMENDED SUPPORT REAGENTS

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



N-WASP (93-W): sc-100964. Western blot analysis of N-WASP expression in non-transfected 293T: sc-117752 (**A**), mouse N-WASP transfected 293T: sc-121912 (**B**) and U-87 MG (**C**) whole cell lysates.



N-WASP (93-W): sc-100964. Immunofluorescence staining of paraformaldehyde-fixed HeLa cells showing nuclear and cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Taha, M.S., et al. 2014. Subcellular fractionation and localization studies reveal a direct interaction of the fragile X mental retardation protein (FMRP) with nucleolin. PLoS ONE 9: e91465.
2. Yao, G., et al. 2014. Polycystin-1 regulates Actin cytoskeleton organization and directional cell migration through a novel PC1-Pacsin 2-N-WASP complex. Hum. Mol. Genet. 23: 2769-2779.
3. Law, H.T., et al. 2015. Mass spectrometry-based proteomics identification of enteropathogenic *Escherichia coli* pedestal constituents. J. Proteome Res. 14: 2520-2527.
4. Dhanda, A.S., et al. 2019. *Listeria* membrane protrusion collapse: requirement of Cyclophilin A for *Listeria* cell-to-cell spreading. J. Infect. Dis. 219: 145-153.

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.

CONJUGATES

See **WASP (B-9): sc-13139** for WASP antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.