SANTA CRUZ BIOTECHNOLOGY, INC.

N-WASP (H-100): sc-20770

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 haematopoietic 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/N-WASP proteins characteristically contain a Pleckstrin homology (PH) domain that binds phosphatidyl-inositol bisphosphate (PIP2), a Cdc42-binding domain, and a 70 amino acid conserved verprolin-homology domain (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 (H-100) is a rabbit polyclonal antibody raised against amino acids 111-210 of N-WASP 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.

Available as agarose conjugate for immunoprecipitation, sc-20770 AC, 500 µg/0.25 ml agarose in 1 ml.

APPLICATIONS

N-WASP (H-100) 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

N-WASP (H-100) is also recommended for detection of N-WASP in additional species, including canine, bovine, porcine and avian.

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.

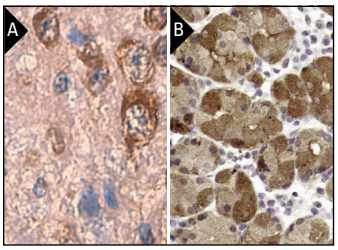
Molecular Weight of N-WASP: 65 kDa.

Positive Controls: SK-N-SH cell lysate: sc-2410, SH-SY5Y cell lysate: sc-3812 or rat brain extract: sc-2392.

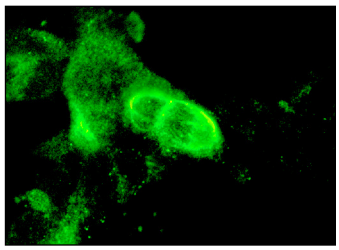
STORAGE

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

DATA



N-WASP (H-100): sc-20770. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse brain tissue showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human stomach tissue showing cytoplasmic and extracellular staining of glandular cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (**B**).



N-WASP (H-100): sc-20770. Immunofluorescence staining of methanol-fixed SK-N-SH cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Shi, J., et al. 2005. WAVE2 signaling mediates invasion of polarized epithelial cells by *Salmonella typhimurium.* J. Biol. Chem. 33: 29849-29855.
2. Zhang, W., et al. 2005. Activation of the Arp2/3 complex by N-WASP is required for Actin polymerization and contraction in smooth muscle. Am. J. Physiol., Cell Physiol. 288: C1145-C1160.
3. Talens-Visconti, R., et al. 2010. RhoE stimulates neurite-like outgrowth in PC12 cells through inhibition of the RhoA/ROCK-I signalling. J. Neurochem. 112: 1074-1087.
4. Romero, A.M., et al. 2010. Chronic ethanol exposure alters the levels, assembly, and cellular organization of the actin cytoskeleton and microtubules in hippocampal neurons in primary culture. Toxicol. Sci. 18: 602-612.
5. Lie, P.P., et al. 2011. Interleukin-1α is a regulator of the blood-testis barrier. FASEB J. 25: 1244-1253.
6. Novak, N., et al. 2011. N-WASP is required for membrane wrapping and myelination by Schwann cells. J. Cell Biol. 192: 243-250.
7. Büchse, T., et al. 2011. CIN85 interacting proteins in B cells-specific role for SHIP-1. Mol. Cell. Proteomics 10: M110.

RESEARCH USE

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

MONOS Satisfaction Guaranteed

Try **N-WASP (C-1): sc-271484** or **N-WASP (93-W): sc-100964**, our highly recommended monoclonal alternatives to N-WASP (H-100).