SANTA CRUZ BIOTECHNOLOGY, INC.

N-WASP (D-15): sc-10122

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 phosphatidyl-inositol 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 (D-15) is available as either goat (sc-10122) or rabbit (sc-10122-R) affinity purified polyclonal antibody raised against a peptide mapping within an internal region 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.

Blocking peptide available for competition studies, sc-10122 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

N-WASP (D-15) 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 (D-15) is also recommended for detection of N-WASP in additional species, including equine, canine, bovine and porcine.

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.

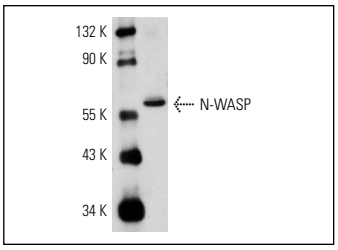
Molecular Weight of N-WASP: 65 kDa.

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

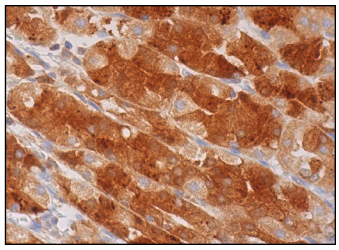
STORAGE

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

DATA



N-WASP (D-15): sc-10122. Western blot analysis of N-WASP expression in rat brain extract.



N-WASP (D-15): sc-10122. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lower stomach tissue showing cytoplasmic and membrane staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Shekarabi, M., et al. 2005. Deleted in colorectal cancer binding netrin-1 mediates cell substrate adhesion and recruits Cdc42, Rac1, Pak1, and N-WASP into an intracellular signaling complex that promotes growth cone expansion. J. Neurosci. 25: 3132-3141.
2. Martin, T.A., et al. 2007. N-WASP is a putative tumour suppressor in breast cancer cells, *in vitro* and *in vivo,* and is associated with clinical outcome in patients with breast cancer. Clin. Exp. Metastasis 25: 97-108.
3. Kabuyama, Y., et al. 2009. A mediator of Rho-dependent invasion moonlights as a methionine salvage enzyme. Mol. Cell. Proteomics 8: 2308-2320.
4. Escudero-Esparza, A., et al. 2011. Claudin-5 participates in the regulation of endothelial cell motility. Mol. Cell. Biochem. 362: 71-85.
5. Martin, T.A., et al. 2012. The clinical and biological implications of N-WASP expression in human colorectal cancer. Transl. Gastrointest. Cancer 1: 10-20.
6. Escudero-Esparza, A., et al. 2012. Claudin-5 is involved in breast cancer cell motility through the N-WASP and ROCK signalling pathways. J. Exp. Clin. Cancer Res. 31: 43.
7. Escudero-Esparza, A., et al. 2012. Claudin-5 is involved in breast cancer cell motility through the N-WASP and ROCK signalling pathways. J. Exp. Clin. Cancer Res. 31: 43.

RESEARCH USE

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