

WAVE1 (A-16): sc-10389

BACKGROUND

WASP (for Wiskott-Aldrich syndrome protein) and N-WASP are downstream effectors of Cdc42 that are implicated in Actin polymerization and cytoskeletal organization. The WASP family also includes VASP (vasodilator-stimulated phosphoprotein) and Mena (for mammalian enabled protein), which accumulate at focal adhesions and are also involved in the regulation of the Actin cytoskeleton. The WAVE proteins are related to the WASP family proteins and are likewise involved in mediating Actin reorganization downstream of the Rho family of small GTPases. The protein homologs WAVE1 and WAVE2 regulate membrane ruffling by inducing the formation of Actin filament clusters in response to GTP binding and by activating Rac. They mediate Actin polymerization by cooperating with the Arp2/3 complex, thereby promoting the formation of Actin filaments. WAVE1, which is also designated SCAR (suppressor of cAR), is expressed primarily in the brain, while WAVE2 is widely expressed, with the expression highest in peripheral blood leukocytes. WAVE3 forms a multiprotein complex that links receptor kinases with Actin and plays a role in the transduction of signals involving changes in cell shape, function or motility.

REFERENCES

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2. Miki, H., Suetsugu, S. and Takenawa, T. 1998. WAVE, a novel WASP-family protein involved in actin reorganization induced by Rac. *EMBO J.* 17: 6932-6941.
3. Bear, J.E., Rawls, J.F. and Saxe, C.L., 3rd. 1998. SCAR, a WASP-related protein, isolated as a suppressor of receptor defects in late *Dictyostelium* development. *J. Cell Biol.* 142: 1325-1335.
4. Machesky, L.M. and Insall, R.H. 1998. Scar1 and the related Wiskott-Aldrich syndrome protein, WASP, regulate the actin cytoskeleton through the Arp2/3 complex. *Curr. Biol.* 8: 1347-1356.
5. 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.
6. Prehoda, K.E., Lee, D.J. and Lim, W.A. 1999. Structure of the enabled/WASP homology 1 domain-peptide complex: a key component in the spatial control of actin assembly. *Cell* 97: 471-480.

CHROMOSOMAL LOCATION

Genetic locus: WASF1 (human) mapping to 6q21; Wasf1 (mouse) mapping to 10 B1.

SOURCE

WAVE1 (A-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of WAVE1 of human origin.

RESEARCH USE

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

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-10389 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

WAVE1 (A-16) is recommended for detection of WAVE1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

WAVE1 (A-16) is also recommended for detection of WAVE1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for WAVE1 siRNA (h): sc-36831, WAVE1 siRNA (m): sc-36832, WAVE1 shRNA Plasmid (h): sc-36831-SH, WAVE1 shRNA Plasmid (m): sc-36832-SH, WAVE1 shRNA (h) Lentiviral Particles: sc-36831-V and WAVE1 shRNA (m) Lentiviral Particles: sc-36832-V.

Molecular Weight of WAVE1: 84 kDa.

Positive Controls: mouse brain extract: sc-2253.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

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

PROTOCOLS

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



Try **WAVE1 (E-2): sc-271507** or **WAVE1 (B-8): sc-271506**, our highly recommended monoclonal alternatives to WAVE1 (A-16).