SANTA CRUZ BIOTECHNOLOGY, INC.

WAVE3 (G-20): sc-26500

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 two protein homologs WAVE1 and WAVE2 specifically regulate membrane ruffling by inducing the formation of Actin filament clusters in response to GTP binding and activating Rac. The WAVE proteins mediate this Actin polymerization by cooperating with the Arp2/3 complex, a nucleation core, and thereby promoting the formation of Actin filaments. WAVE1, which is also designated SCAR (for suppressor of cAR), is expressed primarily in the brain, while WAVE2 is widely expressed with the expression highest in peripheral blood leukocytes.

REFERENCES

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2. 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.
3. 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.
4. 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.
5. Suetsugu, S., Miki, H. and Takenawa, T. 1999. Identification of two human WAVE/SCAR homologues as general Actin regulatory molecules which associate with the Arp2/3 complex. Biochem Biophys. Res. Commun. 260: 296-302.
6. Machesky, L.M., Mullins, R.D., Higgs, H.N., Kaiser, D.A., Blanchoin, L., May, R.C., Hall, M.E. and Pollard, T.D. 1999. SCAR, a WASP-related protein, activates nucleation of Actin filaments by the Arp2/3 complex. Proc. Natl. Acad. Sci. USA 96: 3739-3744.

CHROMOSOMAL LOCATION

Genetic locus: WASF3 (human) mapping to 13q12.13; Wasf3 (mouse) mapping to 5 G3.

SOURCE

WAVE3 (G-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of WAVE3 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-26500 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

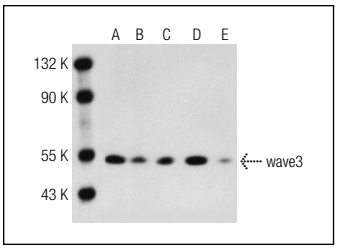
WAVE3 (G-20) is recommended for detection of WAVE3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 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 WAVE3 siRNA (h): sc-44192, WAVE3 siRNA (m): sc-43499, WAVE3 shRNA Plasmid (h): sc-44192-SH, WAVE3 shRNA Plasmid (m): sc-43499-SH, WAVE3 shRNA (h) Lentiviral Particles: sc-44192-V and WAVE3 shRNA (m) Lentiviral Particles: sc-43499-V.

Molecular Weight of WAVE3: 60 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, DU 145 cell lysate: sc-2268 or ES-2 cell lysate: sc-24674 .

DATA



wave3 (G-20): sc-26500. Western blot analysis of wave3 expression in MCF7 (**A**), MDA-MB-231 (**B**), DU 145 (**C**), LNCaP (**D**) and ES-2 (**E**) whole cell lysates.

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.