SANTA CRUZ BIOTECHNOLOGY, INC.

WAVE1 (30): sc-136120

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

1. Symons, M., et al. 1996. Wiskott-Aldrich syndrome protein, a novel effector for the GTPase Cdc42Hs, is implicated in Actin polymerization. Cell 84: 723-734.
2. 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.
3. Miki, H., et al. 1998. WAVE, a novel WASP-family protein involved in Actin reorganization induced by Rac. EMBO J. 17: 6932-6941.
4. Rohatgi, R., et al. 1999. The interaction between N-WASP and the Arp2/3 complex links Cdc42-dependent signals to Actin assembly. Cell 97: 221-231.
5. Prehoda, K.E., et al. 1999. Structure of the enabled/VASP homology 1 domain-peptide complex: a key component in the spatial control of Actin assembly. Cell 97: 471-480.
6. Machesky, L.M., et al. 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: WASF1 (human) mapping to 6q21; Wasf1 (mouse) mapping to 10 B1.

SOURCE

WAVE1 (30) is a mouse monoclonal antibody raised against amino acids 191-290 of WAVE1 of human origin.

PRODUCT

Each vial contains 50 µg IgG_1 in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

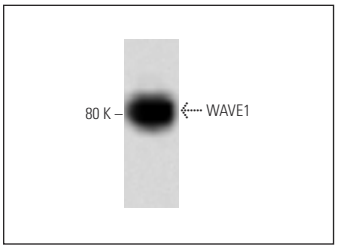
WAVE1 (30) is recommended for detection of WAVE1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

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: rat brain extract: sc-2392, mouse brain extract: sc-2253 or rat cerebrum tissue extract.

DATA



WAVE1 (30): sc-136120. Western blot analysis of WAVE1 expression in rat cerebrum tissue extract.

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 for detailed protocols and support products.