SANTA CRUZ BIOTECHNOLOGY, INC.

WAVE3 (P-15): sc-26499

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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 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

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. Bear, J.E., et al. 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., et al. 1998. WAVE, a novel WASP-family protein involved in actin reorganization induced by Rac. EMBO J. 17: 6932-6941.

CHROMOSOMAL LOCATION

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

SOURCE

WAVE3 (P-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of WAVE3 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-26499 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

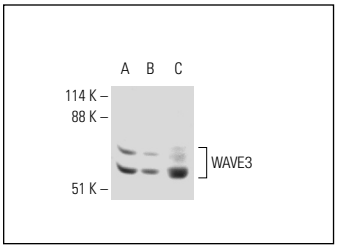
WAVE3 (P-15) is recommended for detection of WAVE3 of human and, to a lesser extent, mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

WAVE3 (P-15) is also recommended for detection of WAVE3 in additional species, including equine, canine, bovine and porcine.

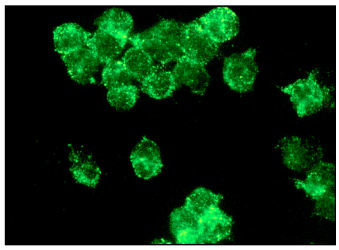
Suitable for use as control antibody for WAVE3 siRNA (h): sc-44192, WAVE3 siRNA (m): sc-43499, WAVE3 shRNA Plasmid (h): sc-44192-SH, WAVE3 shRNA Plasmid (m): sc-43499-SH, WAVE3 shRNA (h) Lentiviral Particles: sc-44192-V and WAVE3 shRNA (m) Lentiviral Particles: sc-43499-V.

Molecular Weight of WAVE3: 60 kDa.

DATA



WAVE3 (P-15): sc-26499. Western blot analysis of WAVE3 expression in SK-N-SH (**A**) and SH-SY5Y (**B**) whole cell lysates and mouse brain tissue extract (**C**).



WAVE3 (P-15): sc-26499. Immunofluorescence staining of methanol-fixed SK-N-MC cells showing cytoskeletal localization.

SELECT PRODUCT CITATIONS

1. Fernando, H.S., et al. 2007. Expression of the WASP verprolin-homologues (WAVE members) in human breast cancer. Oncology 73: 376-383.
2. Jiang, W.G. et al. 2010. Expression of WAVEs, the WASP (Wiskott–Aldrich syndrome protein) family of verprolin homologous proteins in human wound tissues and the biological influence on human keratinocytes. Wound Repair Regen. 18: 594-604.

RESEARCH USE

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