SANTA CRUZ BIOTECHNOLOGY, INC.

WAVE (H-180): sc-5557

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 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.

SOURCE

WAVE (H-180) is a rabbit polyclonal antibody raised against amino acids 1-180 of WAVE1 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.

APPLICATIONS

WAVE (H-180) is recommended for detection of WAVE1, WAVE2 and 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), 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).

WAVE (H-180) is also recommended for detection of WAVE1, WAVE2 and WAVE3 in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of WAVE1/2: 84 kDa.

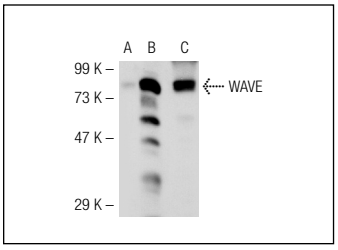
Molecular Weight of WAVE3: 60 kDa.

Positive Controls: WAVE (m): 293T Lysate: sc-124596, IMR-32 cell lysate: sc-2409 or SK-N-MC cell lysate: sc-2237.

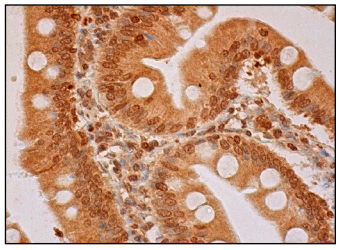
STORAGE

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

DATA



WAVE (H-180): sc-5557. Western blot analysis of WAVE expression in non-transfected: sc-117752 (**A**) and mouse WAVE transfected: sc-124596 (**B**) 293T whole cell lysates and mouse brain tissue extract (**C**).



WAVE (H-180): sc-5557. Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing cytoplasmic and nuclear staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Hashiramoto, A., et al. 2007. Angiopoietin 1 directly induces destruction of the rheumatoid joint by cooperative, but independent, signaling via ERK/MAPK and phosphatidylinositol 3-kinase/Akt. Arthritis Rheum. 56: 2170-2179.
2. Taieb, D., et al. 2008. ArgBP2-dependent signaling regulates pancreatic cell migration, adhesion, and tumorigenicity. Cancer Res. 68: 4588-4596.
3. Roignot, J., et al. 2009. CIP4 is a new ArgBP2 interacting protein that modulates the ArgBP2 mediated control of WAVE1 phosphorylation and cancer cell migration. Cancer Lett. 288: 116-223.
4. Talens-Visconti, R., et al. 2010. RhoE stimulates neurite-like outgrowth in PC12 cells through inhibition of the RhoA/ROCK-I signalling. J. Neurochem. 112: 1074-1087.

RESEARCH USE

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

PROTOCOLS

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

MONOS Satisfaction Guaranteed

Try **WAVE (F-10): sc-365165** or **WAVE2 (C-6): sc-373889**, our highly recommended monoclonal alternatives to WAVE (H-180).