SANTA CRUZ BIOTECHNOLOGY, INC.

WAVE2 (D-16): sc-10392

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.

CHROMOSOMAL LOCATION

Genetic locus: WASF2 (human) mapping to 1p36.11.

SOURCE

WAVE2 (D-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of WAVE2 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-10392 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

WAVE2 (D-16) is recommended for detection of WAVE2 of 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).

WAVE2 (D-16) is also recommended for detection of WAVE2 in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for WAVE2 siRNA (h): sc-36833, WAVE2 shRNA Plasmid (h): sc-36833-SH and WAVE2 shRNA (h) Lentiviral Particles: sc-36833-V.

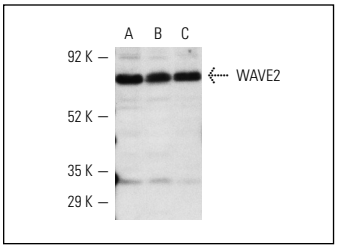
Molecular Weight of WAVE2: 84 kDa.

Positive Controls: MOLT-4 cell lysate: sc-2233, AML-193 whole cell lysate or CCRF-CEM cell lysate: sc-2225.

STORAGE

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

DATA



WAVE2 (D-16): sc-10392. Western blot analysis of WAVE2 expression in MOLT-4 (**A**), AML-193 (**B**) and CCRF-CEM (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Falet, H., et al. 2002. Normal Arp2/3 complex activation in platelets lacking WASp. Blood 100: 2113-2122.
2. Mitsushima, M., et al. 2006. Protein kinase A-dependent increase in WAVE2 expression induced by the focal adhesion protein vinexin. Genes Cells 11: 281-292.
3. Danson, C.M., et al. 2007. Phosphorylation of WAVE2 by MAP kinases regulates persistent cell migration and polarity. J. Cell Sci. 120: 4144-4154.
4. Sirois, M., et al. 2008. R5 and X4 HIV viruses differentially modulate host gene expression in resting CD4+ T cells. AIDS Res. Hum. Retroviruses 24: 485-493.
5. Pocha, S.M., et al. 2009. WAVE2 is regulated by multiple phosphorylation events within its VCA domain. Cell Motil. Cytoskeleton 66: 36-47.
6. Yamashita, H., et al. 2011. WAVE2 forms a complex with PKA and is involved in PKA enhancement of membrane protrusions. J. Biol. Chem. 286: 3907-3914.

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.