SANTA CRUZ BIOTECHNOLOGY, INC.

WAVE2 (C-6): sc-373889

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; Wasf2 (mouse) mapping to 4 D2.3.

SOURCE

WAVE2 (C-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 177-206 within an internal region of WAVE2 of human origin.

PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-373889 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

WAVE2 (C-6) is recommended for detection of WAVE2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 (C-6) 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 siRNA (m): sc-36834, WAVE2 shRNA Plasmid (h): sc-36833-SH, WAVE2 shRNA Plasmid (m): sc-36834-SH, WAVE2 shRNA (h) Lentiviral Particles: sc-36833-V and WAVE2 shRNA (m) Lentiviral Particles: sc-36834-V.

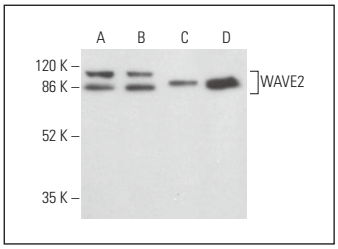
Molecular Weight of WAVE2: 84 kDa.

Positive Controls: CCRF-CEM cell lysate: sc-2225, RAW 264.7 whole cell lysate: sc-2211 or Jurkat whole cell lysate: sc-2204.

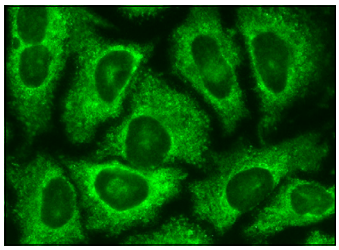
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



WAVE2 (C-6): sc-373889. Western blot analysis of WAVE2 expression in SUP-T1 (**A**), Jurkat (**B**), RAW 264.7 (**C**) and CCRF-CEM (**D**) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



WAVE2 (C-6): sc-373889. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Taniuchi, K., et al. 2018. WAVE2 is associated with poor prognosis in pancreatic cancers and promotes cell motility and invasiveness via binding to ACTN4. Cancer Med. 7: 5733-5751.
2. Tsygankova, O.M. and Keen, J.H. 2019. A unique role for clathrin light chain a in cell spreading and migration. J. Cell Sci. 132: jcs224030.
3. Arkorful, M.A., et al. 2020. MicroRNA-1253 regulation of WASF2 (WAVE2) and its relevance to racial health disparities. Genes 11: 572.
4. Visweshwaran, S.P., et al. 2022. Ena/VASP proteins at the crossroads of actin nucleation pathways in dendritic cell migration. Front. Cell Dev. Biol. 10: 1008898.
5. Sadhu, L., et al. 2023. ARPC5 isoforms and their regulation by calcium-calmodulin-N-WASP drive distinct Arp2/3-dependent actin remodeling events in CD4 T cells. Elife 12: e82450.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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