SANTA CRUZ BIOTECHNOLOGY, INC.

WAVE (F-10): sc-365165

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. Miki, H., et al. 1998. WAVE, a novel WASP-family protein involved in Actin reorganization induced by Rac. EMBO J. 17: 6932-6941.
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. 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.
5. 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.

SOURCE

WAVE (F-10) is a mouse monoclonal antibody raised against amino acids 1-180 of WAVE1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

WAVE (F-10) is available conjugated to agarose (sc-365165 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-365165 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365165 PE), fluorescein (sc-365165 FITC), Alexa Fluor® 488 (sc-365165 AF488), Alexa Fluor® 546 (sc-365165 AF546), Alexa Fluor® 594 (sc-365165 AF594) or Alexa Fluor® 647 (sc-365165 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365165 AF680) or Alexa Fluor® 790 (sc-365165 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

WAVE (F-10) 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).

Molecular Weight of WAVE1: 84 kDa.

Molecular Weight of WAVE2: 84 kDa.

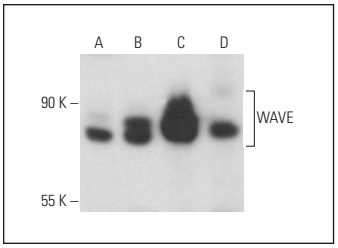
Molecular Weight of WAVE3: 60 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, MDA-MB-231 cell lysate: sc-2232 or rat brain extract: sc-2392.

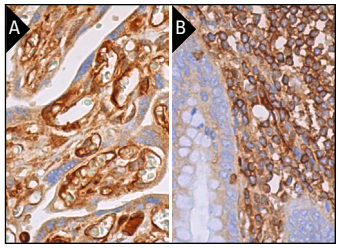
RECOMMENDED SUPPORT REAGENTS

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 A/G PLUS-Agarose: sc-2003 (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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



WAVE (F-10): sc-365165. Western blot analysis of WAVE expression in MCF7 (**A**) and MDA-MB-231 (**B**) whole cell lysates and rat brain tissue extract (**C**) and mouse brain (**D**) tissue extracts.



WAVE (F-10): sc-365165. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic staining of trophoblastic cells and cytoplasmic and membrane staining of endothelial cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human appendix tissue showing cytoplasmic and membrane staining of lymphoid cells (**B**).

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.