

WAVE1 (B-8): sc-271506

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. 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.
4. Prehoda, K.E., et al. 1999. Structure of the enabled/VASP homology 1 domain-peptide complex: a key component in the spatial control of Actin assembly. *Cell* 97: 471-480.
5. Machesky, L.M., et al. 1999. Scar, a WASP-related protein, activates nucleation of Actin filaments by the Arp2/3 complex. *Proc. Natl. Acad. Sci. USA* 96: 3739-3744.

CHROMOSOMAL LOCATION

Genetic locus: WASF1 (human) mapping to 6q21; Wasf1 (mouse) mapping to 10 B1.

SOURCE

WAVE1 (B-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 467-499 near the C-terminus of WAVE1 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ 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-271506 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

WAVE1 (B-8) is recommended for detection of WAVE1 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).

WAVE1 (B-8) is also recommended for detection of WAVE1 in additional species, including bovine.

Suitable for use as control antibody for WAVE1 siRNA (h): sc-36831, WAVE1 siRNA (m): sc-36832, WAVE1 shRNA Plasmid (h): sc-36831-SH, WAVE1 shRNA Plasmid (m): sc-36832-SH, WAVE1 shRNA (h) Lentiviral Particles: sc-36831-V and WAVE1 shRNA (m) Lentiviral Particles: sc-36832-V.

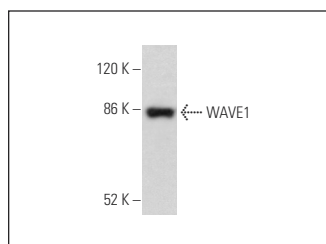
Molecular Weight of WAVE1: 84 kDa.

Positive Controls: rat brain extract: sc-2392, mouse brain extract: sc-2253 or IMR-32 cell lysate: sc-2409.

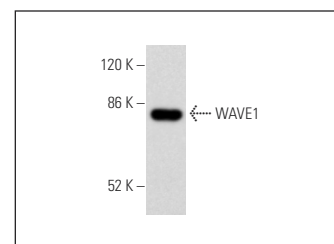
RECOMMENDED SUPPORT REAGENTS

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.

DATA



WAVE1 (B-8): sc-271506. Western blot analysis of WAVE1 expression in IMR-32 whole cell lysate.



WAVE1 (B-8): sc-271506. Western blot analysis of WAVE1 expression in rat brain tissue extract.

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.