

# WAVE1 (N-terminal Region)

Cat. # WP1731

Host Rabbit Polyclonal

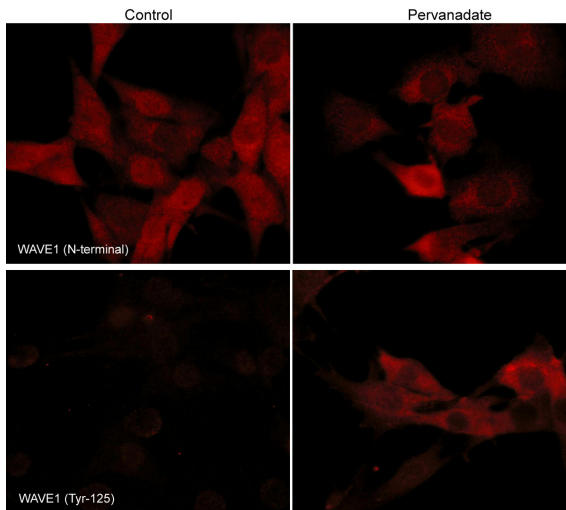
Size 100  $\mu$ l

## Background:

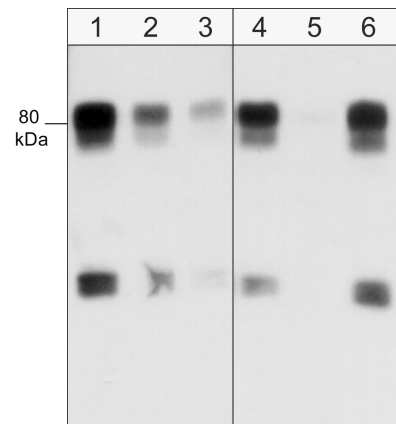
The Wiskott–Aldrich syndrome protein (WASP) family is involved in various pathways that regulate actin cytoskeletal organization. This family includes WASP, N-WASP, and three WAVE/SCAR isoforms, WAVE1, 2, and 3. WAVE proteins play key roles in actin-mediated cell events, such as membrane ruffling and lamellipodia formation. WAVES contain an N-terminal WAVE homology domain, a basic domain, a Proline-rich region, and carboxy terminal verprolin, cofilin, and acidic (VCA) region. WAVES are thought to act downstream of the Rac GTPase, connecting Rac activation to induction of Arp 2/3-mediated actin polymerization. Regulation of WAVE activity can occur through tyrosine phosphorylation. Src phosphorylation of WAVE1 at Tyr-125 enhances binding to the Arp2/3 complex, and is required for WAVE inhibition of Arp2/3-mediated stress fiber formation. By contrast, WAVE2 phosphorylation of Tyr-150 by Abl may enhance Arp2/3 complex actin nucleation and microspike formation in fibroblasts. Thus, site-specific tyrosine phosphorylation may be important for controlling specific activities of WAVE proteins.

## References

- Ardern, H. et al. (2006) *Cell Motil. Cytosk.* 63:6.  
 Leng, Y. et al. (2005) *PNAS* 102(4):1098.  
 Suetsugu, S. et al. (1999) *Bioch. Biophys. Res. Comm.* 260:296.  
 Miki, H. et al. (1999) *J Biol. Chem.* 274(39):27605.



Immunocytochemical labeling of phosphorylated WAVE in pervanadate-treated mouse C2C12. The cells were labeled with rabbit polyclonal WAVE1 (N-terminal region) and WAVE (Tyr-125) antibodies, then the antibodies were detected using appropriate secondary antibodies conjugated to Cy3.



Western blot of human SYF cSrc-transformed cells. Blots were probed with anti-WAVE1 (N-terminal region) at a dilution of 1:1000 (lane 1), 1:2000 (lane 2) or 1:4000 (lane 3). In addition, the antibody was used in the absence (lane 4) or presence of blocking peptides, WAVE1 (N-terminal region) peptide (lane 5) or WAVE2 (Central region) peptide (lane 6).

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Host Rabbit Polyclonal

Size 100 µl

## **Immunogen:**

A synthetic peptide (coupled to KLH) corresponding to amino acid residues in the N-terminal half of human WAVE1. This sequence has high homology with similar regions in rat and mouse WAVE1, and has less than 50% homology to similar regions in human WAVE2 and WAVE3.

## **Buffer and Storage:**

Rabbit polyclonal, affinity-purified antibody is supplied in 100µl phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. Store at -20°C. Do not aliquot. Stable for 1 year.

## **Applications:**

WB 1:1000

ELISA 1:2000

ICC 1:200

End user should determine optimal dilution for their particular applications and experiments.  
Western blot membranes were incubated with diluted antibody in 5% non-fat milk, PBS, 0.04% Tween20 for 1hour at room temperature.

## **Specificity:**

This antibody was affinity purified using WAVE1 (N-terminal region) peptide (without carrier). The antibody detects an 80 kDa\* protein corresponding to the molecular mass of WAVE1 on SDS-PAGE immunoblots of human SYF cSrc-transformed, HUVEC, and K562 cells, as well as rat PC12 cells and mouse C2C12 cells.

\*All molecular weights (MW) are confirmed by comparison to Bio-Rad Rainbow Markers and to western blot mobilities of known proteins with similar MW.

## **Related Products:**

WP1791 WAVE2 (Central Region) Rabbit Polyclonal  
WX1735 WAVE1 (N-terminal region) Peptide  
WX1795 WAVE2 (Central Region) Peptide  
WP1771 WAVE (Tyr-125), phospho-specific Rabbit Polyclonal  
WX1775 phospho-WAVE (Tyr-125) Peptide

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