

WAVE (Tyr-125), phospho-specific

Cat. # WP1771

Host Rabbit Polyclonal

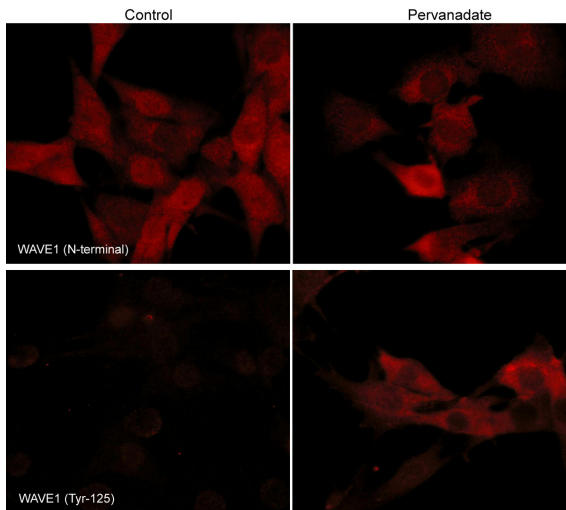
Size 100 µl

Background:

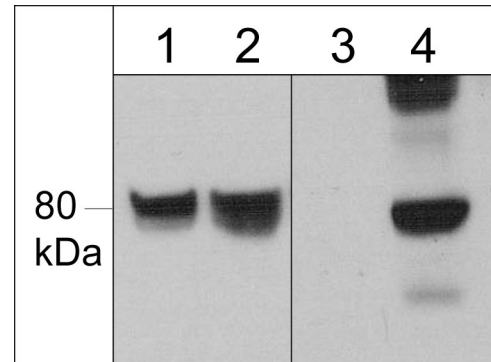
The Wiskott–Aldrich syndrome protein (WASP) family is involved in various pathways that regulate actin cytoskeletal organization. This family includes WASP, N-WASP, and three WAVE/SCAR isoforms, WAVEs 1, 2, and 3. WAVE proteins play key roles in actin-mediated cell events, such as membrane ruffling and 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 untreated (lanes 1 & 3) or treated (lanes 2 & 4) with pervanadate (1 mM; 30 min). The blots were probed with anti-WAVE1 (N-terminal region) (lanes 1 & 2) or anti-WAVE1 (Tyr-125) (lanes 3 & 4).

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WAVE (Tyr-125), phospho-specific

Cat. # WP1771

Host Rabbit Polyclonal

Size 100 µl

Immunogen:

Phospho-WAVE (Tyr-125) peptide (coupled to KLH) corresponding to amino acid residues surrounding Tyr-125 in 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 the conserved site in WAVE2 (Tyr-124) and WAVE3 (Tyr-125).

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 1:100

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 cross-adsorbed to phospho-WAVE (Tyr-150) and unphosphorylated WAVE (Tyr-125) peptides before affinity purification using phospho-WAVE (Tyr-125) peptide. In western blots, the antibody detects an 80 kDa* band corresponding to phosphorylated WAVE in human SYF cSrc transformed cells and mouse macrophages treated with pervanadate, but is not observed in control cells. These bands can be specifically blocked with phospho-WAVE (Tyr-125) peptide (WX1775), but not

*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:

- WP1731 WAVE1 (N-terminal region) Rabbit Polyclonal
- WP1791 WAVE2 (Central region) Rabbit Polyclonal
- WP1821 WAVE (Tyr-150), phospho-specific [Conserved site] Rabbit
- WX1825 phospho-WAVE (Tyr-150) peptide
- WX1775 phospho-WAVE (Tyr-125) Peptide

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