

WAVE (Tyr-150), phospho-specific [Conserved site]

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|---------------|-------------------|
| Cat. # | WP1821 |
| 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.

Immunogen:

Phospho-WAVE (Tyr-150) peptide (coupled to KLH) corresponding to amino acid residues surrounding Tyr-150 in human WAVE2. This sequence has high homology with similar regions in rat and mouse WAVE2, and has homology to the conserved sites in WAVE1 (Tyr-151) and WAVE3 (Tyr-151).

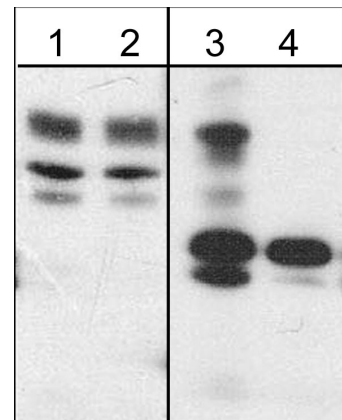
Applications:

| | |
|-------|--------|
| 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 1 hour at room temperature.

Related Products:

- WP1731 WAVE1 (N-terminal region) Rabbit Polyclonal
 WP1791 WAVE2 (Central region) Rabbit Polyclonal
 WP1771 WAVE1 (Tyr-125), phospho-specific Rabbit Polyclonal
 WX1825 phospho-WAVE (Tyr-150) peptide
 WX1775 phospho-WAVE (Tyr-125) Peptide



Western blot of human K562 cells treated with pervanadate (1 mM, 30 min) (lanes 1 & 3) then treated with alkaline phosphatase (lanes 2 & 4). The blots were probed with anti-WAVE2 (Central region) (lanes 1 & 2) or anti-WAVE1 (Tyr-150) (lanes 3 & 4).

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.

Specificity:

This antibody was cross-adsorbed to phospho-WAVE (Tyr-125) and unphosphorylated WAVE (Tyr-150) peptides before affinity purification using phospho-WAVE (Tyr-150) peptide. In western blots, the antibody detects a 78 kDa* corresponding to phosphorylated WAVE2 in K562 cells treated with pervanadate and a 80 kDa band corresponding to WAVE1 in HUVEC treated with pervanadate. It also recognizes an unidentified band near 50 kDa in K562 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.

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