

WAVE1 (N-terminal Region) Peptide

Cat. # WX1735

Size 50 µg

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.

Peptide Sequence:

A synthetic peptide 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.

Applications:

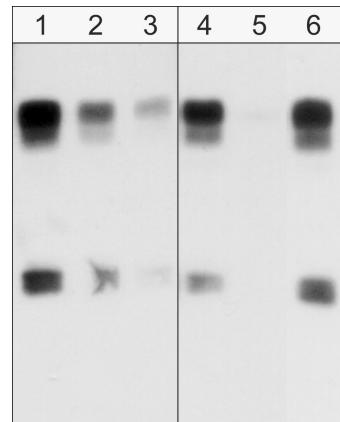
Blocking 1:1,000

ELISA 50 ng/well

End user should determine optimal concentration dependent on the concentration of the antibody.
Recommended for blocking antibody reactivity in Western blot and immunocytochemistry.
ELISA established in 96-well Nunc immunoplates where peptide was bound to plates for 2 hrs in 0.1 M sodium carbonate buffer, pH 8.5.

Related Products:

- WP1731 WAVE1 (N-terminal region) Rabbit Polyclonal
WX1795 WAVE2 (Central Region) Peptide
WP1791 WAVE2 (Central region) Rabbit Polyclonal
WP1771 WAVE (Tyr-125), phospho-specific Rabbit Polyclonal
WX1775 phospho-WAVE (Tyr-125) Peptide



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) of blocking peptide or in the presence of WAVE1 (N-terminal region) peptide (lane 5) or WAVE2 (Central region) peptide (lane 6).

Buffer and Storage:

Blocking Peptide is supplied in 50µl phosphate-buffered saline and 0.05% sodium azide.

Store at -20°C. Stable for 1 year.

Specificity:

The peptide is specifically recognized by WAVE1 (N-terminal region) antibody (WP1731) in ELISA, and has been shown to block the reactivity of WP1731 in Western blot and immunocytochemistry.

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