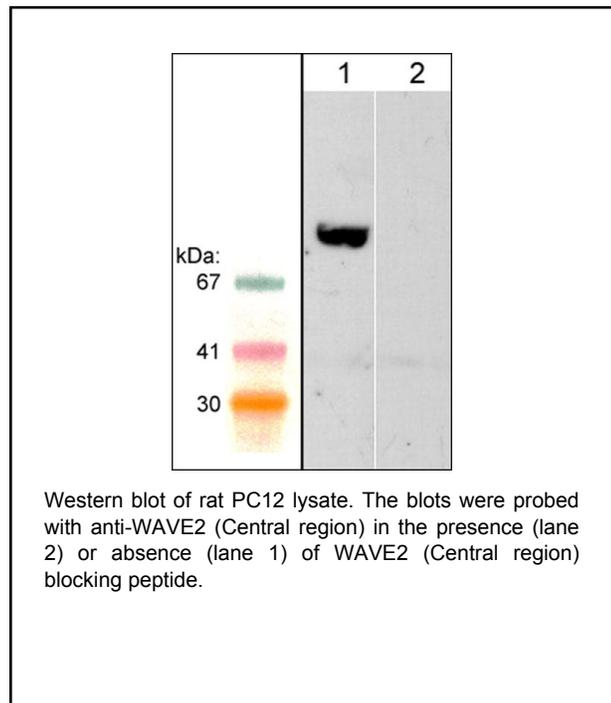


### Background

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.

### Background References

Miki, H. et al. (1999) J Biol. Chem. 274(39):27605.  
Suetsugu, S. et al. (1999) Bioch. Biophys. Res. Comm. 260:296.  
Leng, Y. et al. (2005) PNAS 102(4):1098.



### Applications

Blocking 1:1000  
ELISA 50 ng/well

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.

### Specificity

The peptide is specifically recognized by WAVE2 (N-terminal region) antibody (WP1791) in ELISA, and has been shown to block the reactivity of WP1791 in Western blot and is recommended for blocking in immunocytochemistry.

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

### Peptide Sequence

A synthetic peptide corresponding to amino acid residues in the central region of human WAVE2. This sequence has high homology with similar regions in rat and mouse WAVE2, and has low homology to similar regions in WAVE1 and WAVE3.

### 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.

### Related Products

WP1731 WAVE1 (N-terminal region) Rabbit Polyclonal  
WP1771 WAVE1 (Tyr-125), phospho-specific Rabbit Polyclonal  
WX1735 WAVE1 (N-terminal region) Blocking Peptide  
WX1775 phospho-WAVE (Tyr-125) Blocking Peptide  
WP1791 WAVE2 (Central region) Rabbit Polyclonal

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