

WAVE Phospho-Regulation Antibody Sampler Kit

Catalog # WK6130

Kit Components:

Catalog#	Description	Host	Size	Applications	Species Reactivity	MW (kDa)
WP1771	WAVE (Tyr-125), phospho-specific	Rabbit pAb	50 µl	WB, E	H, R, M	80/84
WP1821	WAVE (Tyr-150), phospho-specific	Rabbit pAb	50 µl	WB, E	H, R, M	80/84
WP1731	WAVE1 (N-terminal Region)	Rabbit pAb	50 µl	WB, E	H, R, M	80
WP1791	WAVE2 (Central Region)	Rabbit pAb	50 µl	WB, E	H, R, M	84
RS3251	Anti-Rabbit Ig Light-Chain Specific:HRP	Mouse mAb	100 µl	WB, E	Rabbit	

Applications: WB = western blot, E = ELISA.

Species: H = Human, R = Rat, M = Mouse, C = Chicken, F = Frog

Kit Summary:

The WAVE phospho-regulation antibody sampler kit can be used to examine phosphorylation of WAVE1 at Tyr-125 and Tyr-150, as well as the conserved sites in WAVE2 and WAVE3. The kit also includes polyclonal antibodies to monitor total expression levels of WAVE1 and WAVE2.

Buffers and Storage:

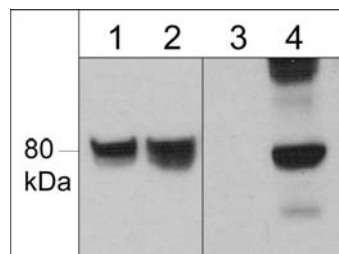
Rabbit polyclonal antibodies are supplied in 50µl phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. Store at -20°C. Do not aliquot. Stable for 1 year.

Background:

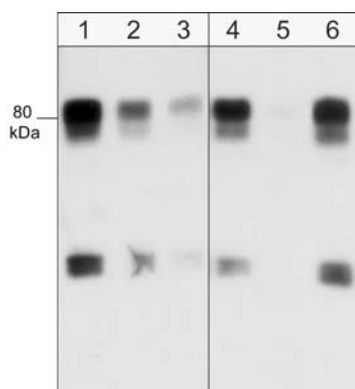
The Wiskott–Aldrich syndrome protein (WASP) family is involved in various pathways that regulate actin cytoskeletal organization. This family includes WASP, N-WASP, and three WAVE/SCAR isoforms, WAVEs 1, 2, and 3. WAVE proteins play key roles in actin-mediated cell events, such as membrane ruffling and 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:

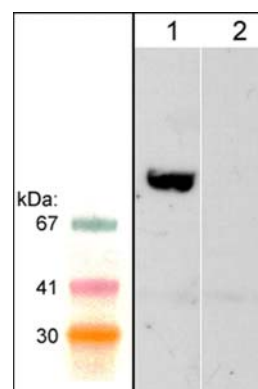
Ardern, H. et al. (2006) Cell Motil. Cytosk. 63:6.
Leng, Y. et al. (2005) PNAS 102(4):1098
Suetsugu, S. et al. (1999) Bioch. Biophys. Res. Comm. 260:296
Miki, H. et al. (1999) J Biol. Chem. 274(39):27605.



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-WAVE (Tyr-125) (lanes 3 & 4).



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).



Western blot of rat PC12 lysate. The blots were probed with anti-WAVE2 (Central region) in the presence (lane 2) or absence (lane 1) of WAVE2 (Central region) blocking peptide (WX1795).

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www.ecmbiosciences.com
telephone: 859-879-2075
toll-free: 1-800-859-8202
info@ecmbiosciences.com

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