

Background

The Vav family of Rho-guanine nucleotide exchange factors, Vav1, Vav2, and Vav3, have central roles in transducing signals from cell surface receptors, such as integrin, growth factor and immune cell receptors to the cytoskeleton. This role includes receptor-mediated changes in the actin cytoskeleton and cell motility. Vav1 expression is normally restricted to hematopoietic cells, while Vav2 and Vav3 are more widely expressed. All three Vav isoforms have been shown to be abnormally expressed in several types of cancer. Vavs are composed of multiple domains, including a Dbl homology domain, a calponin homology domain, an acidic amino acid region, a pleckstrin homology domain, a cysteine-rich domain, and SH3 and SH2 domains. Vav activity is regulated by the phosphorylation status of several conserved tyrosine residues in the acidic region (In Vav2: Tyr-142, Tyr-159, and Tyr-172). These tyrosine residues are able to participate in autoinhibitory interactions with the Dbl homology domain and this interaction is prevented after phosphorylation of these sites leading to activation of Vav GEF activity.

Background References

- Schuebel, K.E. et al. (1996) *Oncogene* 13:363.
Aghazadeh, B. (2000) *Cell* 102:625.
Wilsbacher, J.L. et al. (2006) *Cell Comm. Signal.* 4:5.

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

This peptide is specifically recognized by Vav2 (Tyr-172) phospho-specific antibody (VP2641) in ELISA, and has been shown to block the reactivity of VP2641 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

Phospho-Vav2 (Tyr-172) synthetic peptide corresponding to amino acid residues surrounding Tyr-172 in mouse Vav2. This sequence has high homology with similar regions in rat and human Vav2, and has significant homology to the conserved site in Vav1 and Vav3.

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

- VP2481 Vav (a.a. 165-174) [conserved site] Rabbit Polyclonal
VP2561 Vav2 (Tyr-142)[conserved site], phospho-specific Rabbit Polyclonal
VP2641 Vav2 (Tyr-172)[conserved site], phospho-specific Rabbit Polyclonal
VP2521 Vav2 (a.a. 309-322) Rabbit Polyclonal
VX2485 Vav2 (a.a. 165-174) Blocking Peptide

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