

# Vav2 (Tyr-172), phospho-specific [Conserved site]

Cat. # VP2641

Host Rabbit Polyclonal

Size 100 µl

## 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.

## References

- Schuebel, K.E. et al. (1996) *Oncogene* 13:363. (Background)  
 Aghazadeh, B. (2000) *Cell* 102:625. (Background)  
 Wilsbacher, J.L. et al. (2006) *Cell Comm. Signal.* 4:5. (Background)  
 Afshari, F.T. et al. (2010) *J Neurosci.* 30(12):4246. (ICC: rat schwann cells)

## Immunogen:

Phospho-Vav2 (Tyr-172) synthetic peptide (coupled to KLH) 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.

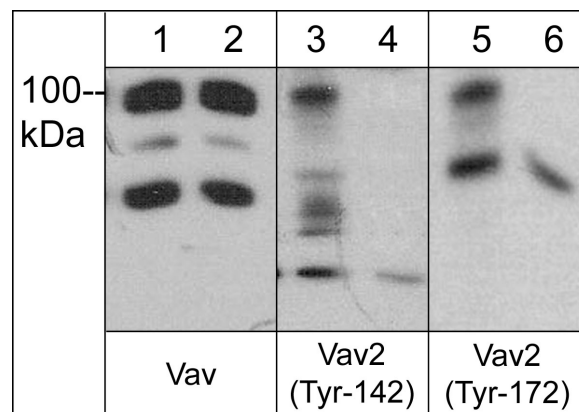
## Applications:

WB	1:1000
ELISA	1:2000
ICC	1:100

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:

- VP2481 Vav (a.a. 165-174) [Conserved site] Rabbit Polyclonal  
 VP2521 Vav2 (a.a. 309-322) Rabbit Polyclonal  
 VP2561 Vav2 (Tyr-142), phospho-specific [Conserved site] Rabbit Polyclonal  
 VP2701 Vav3 (a.a. 293-305) Rabbit Polyclonal  
 VX2645 phospho-Vav2 (Tyr-172) Peptide  
 VX2485 Vav2 (a.a. 165-174) Peptide



Western blot of human A431 cells treated with EGF (lanes 1, 3, & 5) then the blot was exposed to alkaline phosphatase (lanes 2, 4, & 6). The blots were probed with anti-Vav (a.a. 165-174) (lanes 1 & 2), anti-Vav2 (Tyr-142) (lanes 3 & 4), or anti-Vav2 (Tyr-172) (lanes 5 & 6).

## 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 unphosphorylated Vav2 (Tyr-172) peptide before affinity purification using phospho-Vav2 (Tyr-172) peptide (without carrier). The antibody detects a 100 kDa\* band corresponding to Vav on SDS-PAGE immunoblots of human A431 cells treated with EGF and detects Vav1, Vav2, and Vav3 in Jurkat cells treated with pervanadate. The antibody does not detect these Vavs after treatment with alkaline phosphatase.

\*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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