

## Vav3 [pY173] Antibody

**CATALOG NO.: XBP-4290**

### **BACKGROUND:**

Vav proteins belong to the guanidine nucleotide exchange factor family of proteins. These proteins couple receptors to Rho-GTPases. To date, three members of the Vav family have been identified in mammalian cells: Vav1, Vav2, and Vav3. Vav proteins contain multiple protein binding motifs and act as adaptor proteins linking cell surface receptors to downstream signaling proteins. Vav3 transcripts are ubiquitously expressed in wide variety of cell lines including hematopoietic cells, suggesting its role in lymphocyte development and antigen receptor mediated activation of NFAT and NFkappaB. Vav3 is also involved in activating JNK, p21-activated kinase (PAK) and PLCgamma, implicating a critical role in cytoskeletal rearrangement. Vav3 is inducibly tyrosine phosphorylated in response to stimulation of the epidermal growth factor (EGFR), platelet-derived growth factor (PDGFR) and T-cell receptors (TCR), enhancing its guanine nucleotide exchange factor activity in vitro. Tyrosine 173 is the regulatory phosphorylation site of Vav3.

### **SPECIFICITY:**

Mouse Vav3. Human (100% homologous) and chicken (92%) Vav3 have not been tested, but are expected to react.

### **SOURCE:**

Vav3 antibody was produced against a chemically synthesized phosphopeptide derived from a region of human Vav3 that contains tyrosine 173. The sequence is conserved in mouse.

Vav3 antibody was purified from rabbit serum by sequential epitope-specific chromatography. The antibody has been negatively preadsorbed using a non-phosphopeptide corresponding to the site of phosphorylation to remove antibody that is reactive with non-phosphorylated Vav3. The final product is generated by affinity chromatography using a Vav3-derived peptide that is phosphorylated at tyrosine 173.

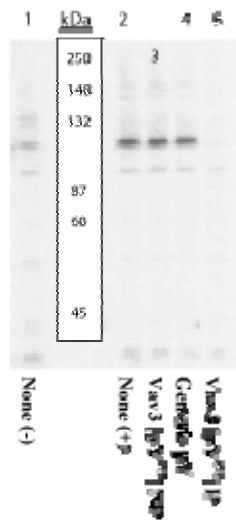
### **APPLICATION:**

For Western blotting, we recommend using the antibody at 0.1-1.0 µg/mL. At 0.50 µg/mL, the dilution provides 100 mL working solution, which at 10 mL/blot allows 10 blots to be performed. **This product is for research use only.**

### **STORAGE:**

Store at -80°C. Upon initial thawing, apportion into working aliquots and Store at -80°C. Avoid repeated freeze-thaw cycles to prevent denaturing the antibody.

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Cos7 cells over-expressing murine Vav3 were serum starved and left untreated (1) or treated (2-5) with 50 ng/mL EGF, resolved by SDS-PAGE on a 10% Tris-glycine gel and transferred to PVDF. Membranes were blocked with a 5% BSA-TBST buffer overnight at 4°C, then were incubated with 0.50 µg/mL Vav3 [pY173] antibody for two hours at room temperature in a 3% BSA-TBST buffer, following prior incubation with: no peptide (1, 2), the non-phosphopeptide corresponding to the immunogen (3), a generic phosphotyrosine containing peptide (4), or, the phosphopeptide immunogen (5). After washing, membranes were incubated with goat F(ab')<sub>2</sub> anti-rabbit IgG alkaline phosphatase and signals were detected using the Tropix WesternStar(TM) method. The data show that only the peptide corresponding to Vav3 [pY173] blocks the antibody signal, thereby demonstrating the specificity of the antibody, and EGF-induced tyrosine phosphorylation of Vav3 [pY173].