

Rabbit (polyclonal) Anti-Vav1 [pY160] Phosphospecific Antibody, Unconjugated

Store at 2°C to 8°C (short-term), or -20°C (long-term)

Catalog Number: 44-482

Pub. No. MAN0010090 Rev. 1.00

Clonality: Polyclonal

Quantity: 10 mini-blot size

Volume: See product label

Host/Class: Rabbit IgG

Reactivity: Human Vav1 [pY160]

Predicted Reactivity: Human, Mouse, Rat

Product description

Vav proteins belong to the guanidine nucleotide exchange factor family of proteins. To date, three members of the Vav family (Vav1, Vav2, and Vav3) have been identified in mammalian cells. Vav proteins contain multiple protein binding motifs, and act as adaptor proteins to couple receptors to downstream signaling proteins. Vav1 is exclusively expressed in hematopoietic cells and plays a significant role in lymphocyte development. It also play a role in calcium mobilization, and cytoskeletal rearrangement. Activation of cell surface receptors including integrins, immune response receptors, and growth factor receptors can lead to phosphorylation of Vav1 on tyrosine residues including tyrosine 160.

Product specifications

Immunogen:	A chemically synthesized phosphopeptide derived from a region of human Vav1 that contains tyrosine 160.
Purification:	Antibody negatively preadsorbed using a non-phosphopeptide then purified by epitope-specific affinity chromatography
Lot:	See product label

Product applications

The antibody has been used in western blotting applications (1:1000 dilution). Other applications may work but have not been tested.

Because conditions may vary, it is recommended that each investigator determine the optimal amount of antibody to be used for each application.

Storage and handling

Store the antibody at 2°C to 8°C for up to 1 week, or apportion into working aliquots and keep at -20°C for long-term storage. Avoid repeated freezing and thawing.

Stability

When stored as instructed, expires one year from date of receipt unless otherwise indicated on the Certificate of Analysis.

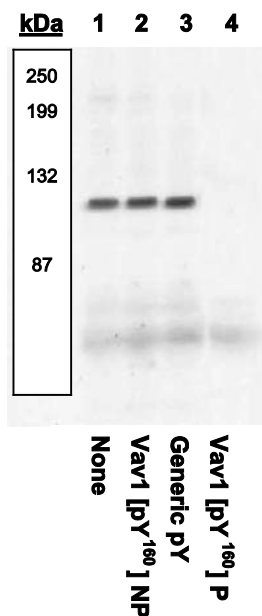


Figure 1 Peptide Competition.

Vav1 protein immunoprecipitated from K562 cell extracts were resolved on a 10% Tris-glycine gel and transferred to PVDF. The membrane was blocked with 5% BSA-TBST overnight at 4°C then incubated with the Vav1 [pY160] antibody (0.50 µg/mL) for 2 hrs at room temperature in 3% BSA-TBST, following prior incubation with: no peptide (lane 1), a non-phosphorylated peptide corresponding to the immunogen (lane 2), a generic phosphotyrosine-containing peptide (lane 3), or the phosphopeptide immunogen (lane 4). The blots were developed using chemiluminescence (ECL) method with a goat F(ab')₂ anti-rabbit IgG AP conjugate (Cat. no. ALI4405).

Only the phosphopeptide corresponding to Vav1 [pY160] blocks the antibody signal (lane 4) demonstrating the specificity of the antibody.

Positive controls used

Jurkat cells, serum starved for 2 hours, then treated with 1 mM pervanadate for 5–30 minutes, or K562 cells expressing wild-type human Integrin α, and β3 proteins.

Storage buffer

Dulbecco's phosphate buffered saline (without Mg²⁺ and Ca²⁺), pH 7.3 (+/- 0.1), 50% glycerol with 1.0 mg/mL BSA (IgG, protease free) as a carrier, and 0.05% sodium azide.



CAUTION! Sodium azide is extremely toxic and may react with lead and copper plumbing to form highly explosive metal azides. Properly dispose of solutions containing sodium azide. Read the Safety Data Sheet (SDS) and follow the handling instructions. Wear appropriate protective eyewear, clothing, and gloves. SDSs are available at www.lifetechnologies.com/support.

References

- Houlard, M., et al. (2002) Vav1 is a component of transcriptionally active complexes. *J. Exp. Med.* 195(9):1115-1127.
- Manetz, T.S., et al. (2001) Vav1 regulates phospholipase C gamma activation and calcium responses in mast cells. *Mol. Cell Biol.* 21(11):3763-3774.
- Woodside, D.G., et al. (2001) Activation of Syk protein tyrosine kinase through interaction with integrin beta cytoplasmic domains. *Curr. Biol.* 11(22):1799-1804.
- Bustelo, X.R. (2001) Vav proteins, adaptors and cell signaling. *Oncogene.* 20(44):6372-6381.
- Moores, S.L., et al. (2000) Vav family proteins couple to diverse cell surface receptors. *Mol. Cell Biol.* 20(17):6364-6373.
- Costello, P.S., et al. (1999) The Rho-family GTP exchange factor Vav is a critical transducer of Tcell receptor signals to the calcium, ERK, and NF-kappaB pathways. *Proc. Nat'l. Acad. Sci. USA.* 96(6):3035-3040.
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Related products

Product Name	Quantity	Cat. No.
Phospholipase C Gamma-1 [pY783] Polyclonal Antibody, Rabbit	10 blots	44-696G
JNK (SAPK) [pTpY183/185] Polyclonal Antibody, Rabbit	10 blots	44-682G
PAK1/2/3 [pS141] Rabbit Polyclonal Antibody	10 blots	44-940G
PAK1/2/3 [pT423] Rabbit Polyclonal Antibody	10 blots	44-942G

Product documentation

To obtain a Certificate of Analysis or Safety Data Sheets (SDSs), visit www.lifetechnologies.com/support.

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Explanation of symbols

Symbol	Description	Symbol	Description	Symbol	Description
	Manufacturer		Catalog number		Batch code
	Use by		Temperature limitation		
	Consult instructions for use		Caution, consult accompanying documents		

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