SANTA CRUZ BIOTECHNOLOGY, INC.

Vav (B-6): sc-55482

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The Power to Question

BACKGROUND

The Vav gene was originally identified on the basis of its oncogenic activation during the course of gene transfer assays. The major translational product of the Vav proto-oncogene has been identified as a protein containing an array of structural motifs. This protein, known as Vav, Vav1 or p95Vav, contains an N-terminal helix-loop-helix domain and a leucine zipper motif similar to that of Myc family proteins that, if deleted, causes oncogenic activation. In addition, Vav contains an SH2 domain, which could indicate its role as a substrate for tyrosine kinases. Expression of Vav is limited exclusively to cells of hematopoietic origin, including those of the erythroid, lymphoid and myeloid lineages. These results suggest that Vav may represent a new type of signal transduction molecule involved in the transduction of tyrosine phosphorylation signaling into transcriptional events.

REFERENCES

1. Katzav, S., et al. 1989. Vav, a novel human oncogene derived from a locus ubiquitously expressed in hematopoietic cells. EMBO J. 8: 2283-2290.
2. Ullrich, A. and Schlessinger, J. 1990. Signal transduction by receptors with tyrosine kinase activity. Cell 61: 203-212.

CHROMOSOMAL LOCATION

Genetic locus: VAV1 (human) mapping to 19p13.3; Vav1 (mouse) mapping to 17 D.

SOURCE

Vav (B-6) is a mouse monoclonal antibody raised against amino acids 110-320 of Vav p95 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

Vav (B-6) is recommended for detection of Vav of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Vav siRNA (h): sc-29517, Vav siRNA (m): sc-29518, Vav shRNA Plasmid (h): sc-29517-SH, Vav shRNA Plasmid (m): sc-29518-SH, Vav shRNA (h) Lentiviral Particles: sc-29517-V and Vav shRNA (m) Lentiviral Particles: sc-29518-V.

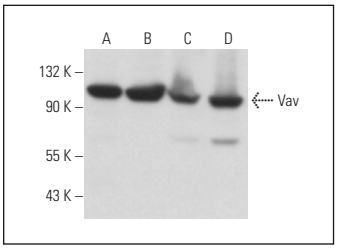
Molecular Weight of Vav: 95 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, CCRF-CEM cell lysate: sc-2225 or MM-142 cell lysate: sc-2246.

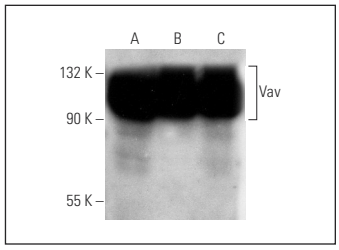
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Vav (B-6): sc-55482. Western blot analysis of Vav expression in Jurkat (**A**), CCRF-CEM (**B**), HEL 92.1.7 (**C**) and MM-142 (**D**) whole cell lysates.



Vav (B-6): sc-55482. Western blot analysis of Vav expression in Jurkat (**A**), MOLT-4 (**B**) and CTLL-2 (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Samayawardhena, L.A., et al. 2008. Protein-tyrosine phosphatase α regulates stem cell factor-dependent c-Kit activation and migration of mast cells. J. Biol. Chem. 283: 29175-29185.
2. Brugnoli, F., et al. 2009. Vav1 and PU.1 are recruited to the CD11b promoter in APL-derived promyelocytes: role of Vav1 in modulating PU.1-containing complexes during ATRA-induced differentiation. Exp. Cell Res. 316: 38-47.
3. Delaney, M.K., et al. 2012. The role of Rac1 in glycoprotein Ib-IX-mediated signal transduction and integrin activation. Arterioscler. Thromb. Vasc. Biol. 32: 2761-2768.
4. Cavnar, P.J., et al. 2012. The Actin regulatory protein HS1 interacts with Arp2/3 and mediates efficient neutrophil chemotaxis. J. Biol. Chem. 287: 25466-25477.
5. Rofia, B., et al. 2021. Regulatory interplay between Vav1, Syk and β-catenin occurs in lung cancer cells. Cell. Signal. E-published.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

CONJUGATES

See **Vav (D-7): sc-8039** for Vav antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.