SANTA CRUZ BIOTECHNOLOGY, INC.

# Vav2 (C-19): sc-8587

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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 protooncogene has been identified as a protein containing an array of structural motifs. Contained within its amino terminus are a helix-loop-helix domain and a leucine zipper motif similar to that of Myc family proteins; deletion of this region of p95Vav causes its oncogenic activation. In addition, p95Vav contains an SH2 domain, which could indicate its role as a substrate for tyrosine kinases. Expression of p95Vav is limited exclusively to cells of hematopoietic origin, including those of the erythroid, lymphoid and myeloid lineages. These results suggest that p95Vav may represent a new type of signal transduction molecule involved in the transduction of tyrosine phosphorylation signaling into transcriptional events. Vav2 is a member of the Vav family of oncoproteins and acts as a guanosine nucleotide exchange factor (GEF) for RhoG and RhoA-like GTPases in a phosphotyrosine-dependent manner.

## 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.
3. Katzav, S., et al. 1991. Loss of the amino-terminal helix-loop-helix domain of the vav proto-oncogene activates its transforming potential. Mol. Cell. Biol. 11: 1912-1920.
4. Coppola, J., et al. 1991. Mechanism of activation of the vav proto-oncogene. Cell Growth Differ. 2: 95-105.
5. Bustelo, X.R., et al. 1992. Product of vav proto-oncogene defines a new class of tyrosine protein kinase substrates. Nature 356: 68-71.
6. Margolis, B., et al. 1992. Tyrosine phosphorylation of vav proto-oncogene product containing SH2 domain and transcription factor motifs. Nature 356: 71-74.
7. Bustelo, X.R. and Barbacid, M. 1992. Tyrosine phosphorylation of the vav proto-oncogene product in activated B cells. Science 256: 1196-1199.


## CHROMOSOMAL LOCATIONS

Genetic locus: VAV2 (human) mapping to 9q34.2; Vav2 (mouse) mapping to 2 A3.

## SOURCE

Vav2 (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Vav2 of human origin.

## STORAGE

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

## RESEARCH USE

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

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-8587 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Vav2 (C-19) is recommended for detection of Vav2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Vav2 (C-19) is also recommended for detection of Vav2 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for Vav2 siRNA (h): sc-41738, Vav2 siRNA (m): sc-41739, Vav2 shRNA Plasmid (h): sc-41738-SH, Vav2 shRNA Plasmid (m): sc-41739-SH, Vav2 shRNA (h) Lentiviral Particles: sc-41738-V and Vav2 shRNA (m) Lentiviral Particles: sc-41739-V.

Molecular Weight of Vav2: 100 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, mouse brain extract: sc-2253 or A-431 whole cell lysate: sc-2201.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## SELECT PRODUCT CITATIONS


1. Meng, W., et al. 2004. DIP (mDia interacting protein) is a key molecule regulating Rho and Rac in a Src-dependent manner. EMBO J. 23: 760-771.
2. Mamipudi, V., et al. 2004. RACK1 regulates $G_1$/S progression by suppressing Src kinase activity. Mol. Cell. Biol. 24: 6788-6798.
3. Madureira, P., et al. 2005. Murine γ-herpesvirus 68 latency protein M2 binds to Vav signaling proteins and inhibits B-cell receptor-induced cell cycle arrest and apoptosis in WEHI-231 B cells. J. Biol. Chem. 280: 37310-37318.