SANTA CRUZ BIOTECHNOLOGY, INC.

Vav (E-4): sc-17831

SANTA CRUZ BIOTECHNOLOGY

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.

CHROMOSOMAL LOCATION

Genetic locus: VAV1 (human) mapping to 19p13.3.

SOURCE

Vav (E-4) is a mouse monoclonal antibody raised against amino acids 110-320 mapping to a central domain of Vav p95 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Vav (E-4) is available conjugated to agarose (sc-17831 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-17831 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-17831 PE), fluorescein (sc-17831 FITC), Alexa Fluor® 488 (sc-17831 AF488), Alexa Fluor® 546 (sc-17831 AF546), Alexa Fluor® 594 (sc-17831 AF594) or Alexa Fluor® 647 (sc-17831 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-17831 AF680) or Alexa Fluor® 790 (sc-17831 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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RESEARCH USE

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

APPLICATIONS

Vav (E-4) is recommended for detection of Vav p95 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:500), 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 shRNA Plasmid (h): sc-29517-SH and Vav shRNA (h) Lentiviral Particles: sc-29517-V.

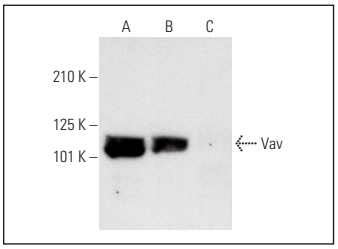
Molecular Weight of Vav: 95 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, NCI-H929 whole cell lysate: sc-364786 or MOLT-4 cell lysate: sc-2233.

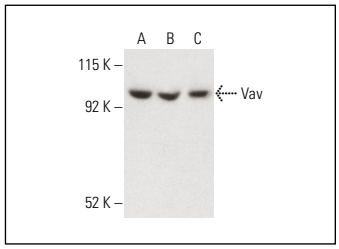
RECOMMENDED SUPPORT REAGENTS

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 (E-4): sc-17831. Western blot analysis of Vav expression in Jurkat (**A**), MOLT-4 (**B**) and CTLL-2 (**C**) whole cell lysates. Note lack of reactivity with mouse Vav in lane **C**.



Vav (E-4): sc-17831. Western blot analysis of Vav expression in Jurkat (**A**), MOLT-4 (**B**) and NCI-H929 (**C**) whole cell lysates. Detection reagent used: m-IgG Fc BP-HRP: sc-525409.

SELECT PRODUCT CITATIONS

1. Garcia-Bernal, D., et al. 2005. Vav1 and Rac control chemokine-promoted T lymphocyte adhesion mediated by the integrin α4β1. Mol. Biol. Cell 16: 3223-3235.
2. Bartolome, R.A., et al. 2006. Activation of Vav/Rho GTPase signaling by CXCL12 controls membrane-type matrix metalloproteinase-dependent melanoma cell invasion. Cancer Res. 66: 248-258.
3. Garcia-Bernal, D., et al. 2006. DOCK2 is required for chemokine-promoted human T lymphocyte adhesion under shear stress mediated by the integrin α4β1. J. Immunol. 177: 5215-5225.
4. Rouquette-Jazdanian, A.K., et al. 2007. Full CD3/TCR activation through cholesterol-depleted lipid rafts. Cell. Signal. 19: 1404-1418.
5. Zangiacomi, V., et al. 2009. Human cord blood-derived hematopoietic and neural-like stem/progenitor cells are attracted by the neurotransmitter GABA. Stem Cells Dev. 18: 1369-1378.
6. Gupta, R., et al. 2013. Glutamate induces neutrophil cell migration by activating class I metabotropic glutamate receptors. Amino Acids 44: 757-767.
7. Hasan, S., et al. 2019. Distinct spatiotemporal distribution of bacterial toxin-produced cellular cAMP differentially inhibits opsonophagocytic signaling. Toxins 11: 362.

STORAGE

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