SANTA CRUZ BIOTECHNOLOGY, INC.

SLP-76 (F-7): sc-13151

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The translational product of the Vav proto-oncogene is exclusively expressed in cells of hematopoietic origin and is critical for lymphocyte development and activation. However, the biochemical basis of Vav's function is unclear. Vav contains a single SH2 domain that is required for its association with the T cell receptor (TCR). Overexpression of Vav or SLP-76 in Jurkat cells leads to NFAT activation and IL-2 production. When co-expressed, Vav and SLP-76 synergize to induce a robust basal and TCR-mediated IL-2 response. Although SLP-76 does not contain a motif that would indicate it to be a member of the tyrosine, serine/threonine or lipid kinase families, it does contain several putative SH2/SH3-binding domains and has been shown to physically associate with the adapter protein GRB2 as well as PLC γ1. The discovery of SLP-76 represents an important step in elucidating the mechanism of Vav transformation and TCR-mediated NFAT activation.

CHROMOSOMAL LOCATION

Genetic locus: LCP2 (human) mapping to 5q35.1; Lcp2 (mouse) mapping to 11 A4.

SOURCE

SLP-76 (F-7) is a mouse monoclonal antibody raised against amino acids 234-533 of SLP-76 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.

SLP-76 (F-7) is available conjugated to agarose (sc-13151 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-13151 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-13151 PE), fluorescein (sc-13151 FITC), Alexa Fluor® 488 (sc-13151 AF488), Alexa Fluor® 546 (sc-13151 AF546), Alexa Fluor® 594 (sc-13151 AF594) or Alexa Fluor® 647 (sc-13151 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-13151 AF680) or Alexa Fluor® 790 (sc-13151 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

SLP-76 (F-7) is recommended for detection of SLP-76 of mouse, rat and human origin by Western Blotting (starting dilution 1:1,000, dilution range 1:1,000-1:5,000), 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), immunohistochemistry (including paraffin-embedded sections) (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 SLP-76 siRNA (h): sc-36501, SLP-76 siRNA (m): sc-36502, SLP-76 shRNA Plasmid (h): sc-36501-SH, SLP-76 shRNA Plasmid (m): sc-36502-SH, SLP-76 shRNA (h) Lentiviral Particles: sc-36501-V and SLP-76 shRNA (m) Lentiviral Particles: sc-36502-V.

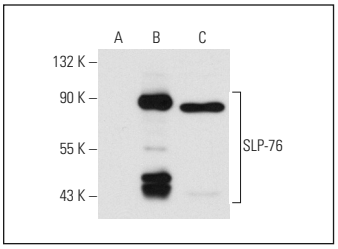
Molecular Weight of SLP-76: 76 kDa.

Positive Controls: THP-1 cell lysate: sc-2238, SLP-76 (h3): 293T Lysate: sc-175892 or AML-193 whole cell lysate: sc-364182.

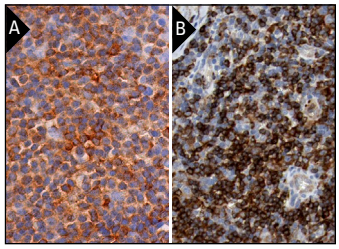
STORAGE

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

DATA



SLP-76 (F-7): sc-13151. Western blot analysis of SLP-76 expression in non-transfected 293T: sc-117752 (**A**), human SLP-76 transfected 293T: sc-175892 (**B**) and AML-193 (**C**) whole cell lysates.



SLP-76 (F-7): sc-13151. Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing cytoplasmic and membrane staining of cells in germinal and non-germinal centers (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing cytoplasmic and membrane staining of follicle and non-follicle cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (**B**).

SELECT PRODUCT CITATIONS

1. Marafioti, T., et al. 2004. Expression of intracellular signaling molecules in classical and lymphocyte predominance Hodgkin disease. Blood 103: 188-193.
2. Boldizsar, F., et al. 2013. ZAP-70 tyrosines 315 and 492 transmit non-genomic glucocorticoid (GC) effects in T cells. Mol. Immunol. 53: 111-117.
3. Shih, C.H., et al. 2014. A critical role for the regulation of Syk from agglutination to aggregation in human platelets. Biochem. Biophys. Res. Commun. 443: 580-585.
4. Bilal, M.Y., et al. 2015. GADS is required for TCR-mediated calcium influx and cytokine release, but not cellular adhesion, in human T cells. Cell. Signal. 27: 841-850.
5. Qu, X., et al. 2017. Molecular mechanisms underlying the evolution of the SLP76 signalosome. Sci. Rep. 7: 1509.
6. Moncayo, G., et al. 2018. SYK inhibition blocks proliferation and migration of glioma cells and modifies the tumor microenvironment. Neuro-oncology 20: 621-631.
7. Wang, Q.L., et al. 2019. T cell receptor (TCR)-induced PLC-γ1 sumoylation via PIASxβ and PIAS3 SUMO E3 ligases regulates the microcluster assembly and physiological function of PLC-γ1. Front. Immunol. 10: 314.
8. Yu, Y.L., et al. 2021. STAT1 epigenetically regulates LCP2 and TNFAIP2 by recruiting EP300 to contribute to the pathogenesis of inflammatory bowel disease. Clin. Epigenetics 13: 127.

RESEARCH USE

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