

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

## 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  $\gamma$ 1. 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  $\mu$ g IgG $\gamma$  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  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-13151 HRP), 200  $\mu$ g/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  $\mu$ g/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  $\mu$ g/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  $\mu$ g per 100-500  $\mu$ g 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.

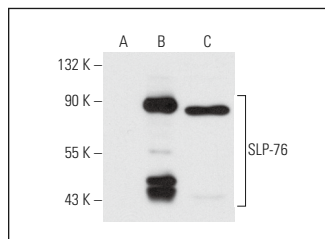
Molecular Weight of SLP-76: 76 kDa.

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

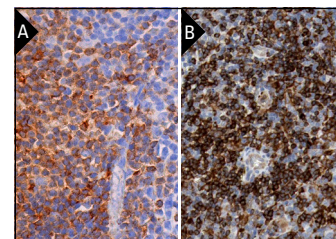
## STORAGE

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

- Marafioti, T., et al. 2004. Expression of intracellular signaling molecules in classical and lymphocyte predominance Hodgkin disease. *Blood* 103: 188-193.
- 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.
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- 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.
- Qu, X., et al. 2017. Molecular mechanisms underlying the evolution of the SLP76 signalosome. *Sci. Rep.* 7: 1509.
- Moncayo, G., et al. 2018. SYK inhibition blocks proliferation and migration of glioma cells and modifies the tumor microenvironment. *Neuro-oncology* 20: 621-631.
- Wang, Q.L., et al. 2019. T cell receptor (TCR)-induced PLC- $\gamma$ 1 sumoylation via PIASx $\beta$  and PIAS3 SUMO E3 ligases regulates the microcluster assembly and physiological function of PLC- $\gamma$ 1. *Front. Immunol.* 10: 314.
- 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.

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