SANTA CRUZ BIOTECHNOLOGY, INC.

LOK (D-6): sc-398083

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The phosphorylation and dephosphorylation of proteins on serine and threonine residues is an essential means of regulating a broad range of cellular functions in eukaryotes, including cell division, homeostasis and apoptosis. A group of proteins that are intimately involved in this process are the serine/threonine (Ser/Thr) protein kinases. LOK (lymphocyte-oriented kinase), also known as STK10 (serine/threonine kinase 10), is a 968 amino acid protein that contains one protein kinase domain and belongs to the Ser/Thr protein kinase family. Expressed in lymphoid organs, LOK functions to catalyze the ATP-dependent phosphorylation of target proteins, such as MBP (myelin basic protein) and Histone H2A, thereby playing a role in signaling pathways throughout the cell.

REFERENCES

1. Kuramochi, S., et al. 1997. LOK is a novel mouse STE20-like protein kinase that is expressed predominantly in lymphocytes. J. Biol. Chem. 272: 22679-22684.
2. Kuramochi, S., et al. 1999. Molecular cloning of the human gene STK10 encoding lymphocyte-oriented kinase, and comparative chromosomal mapping of the human, mouse, and rat homologues. Immunogenetics 49: 369-375.
3. Ellinger-Ziegelbauer, H., et al. 2000. STE20-like kinase (SLK), a regulatory kinase for polo-like kinase (Plk) during the G_2/M transition in somatic cells. Genes Cells 5: 491-498.
4. Tao, L., et al. 2002. Opposing roles of serine/threonine kinases MEKK1 and LOK in regulating the CD28 responsive element in T-cells. Biochem. J. 363: 175-182.

CHROMOSOMAL LOCATION

Genetic locus: STK10 (human) mapping to 5q35.1; Stk10 (mouse) mapping to 11 A4.

SOURCE

LOK (D-6) is a mouse monoclonal antibody raised against amino acids 258-308 mapping within an internal region of LOK 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.

LOK (D-6) is available conjugated to agarose (sc-398083 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398083 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398083 PE), fluorescein (sc-398083 FITC), Alexa Fluor® 488 (sc-398083 AF488), Alexa Fluor® 546 (sc-398083 AF546), Alexa Fluor® 594 (sc-398083 AF594) or Alexa Fluor® 647 (sc-398083 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398083 AF680) or Alexa Fluor® 790 (sc-398083 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

LOK (D-6) is recommended for detection of LOK of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 LOK siRNA (h): sc-75685, LOK siRNA (m): sc-75686, LOK shRNA Plasmid (h): sc-75685-SH, LOK shRNA Plasmid (m): sc-75686-SH, LOK shRNA (h) Lentiviral Particles: sc-75685-V and LOK shRNA (m) Lentiviral Particles: sc-75686-V.

Molecular Weight (predicted) of LOK: 112 kDa.

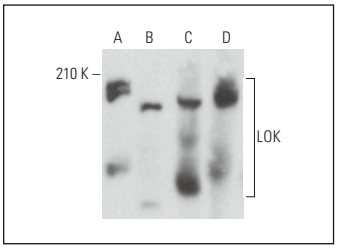
Molecular Weight (observed) of LOK: 130/185 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, A-431 whole cell lysate: sc-2201 or HT-29 whole cell lysate: sc-364232.

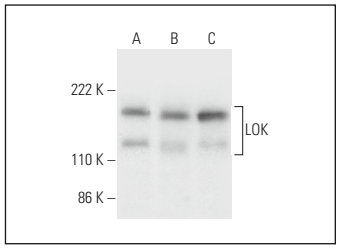
RECOMMENDED SUPPORT REAGENTS

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



LOK (D-6): sc-398083. Western blot analysis of LOK expression in Jurkat (**A**), RT-4 (**B**) and PC-3 (**C**) whole cell lysates and rat thymus tissue extract (**D**).



LOK (D-6): sc-398083. Western blot analysis of LOK expression in Jurkat (**A**), HT-29 (**B**) and A-431 (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Kschonsak, Y.T. and Hoffmann, I. 2018. Activated ezrin controls MISP levels to ensure correct NuMA polarization and spindle orientation. J. Cell Sci. 131: jcs214544.

STORAGE

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