

# Lck (B-10): sc-166627

## BACKGROUND

Src is the human homolog of the v-Src gene of the Rous sarcoma virus, also known as avian sarcoma virus, or ASV. Src was the first proto-oncogenic, non-receptor tyrosine kinase characterized in human. By virtue of common structural motifs, the Src family is composed of nine members in vertebrates, including Src, Yes, Fgr, Frk, Fyn, Lyn, Hck, Lck and Blk. Src family kinases transduce signals that are involved in the control of a variety of cellular processes, including proliferation, differentiation, motility and adhesion. Src family kinases contain an amino-terminal cell membrane anchor, followed by an SH3 domain and an SH2 domain that are involved in modular association and activation, respectively. Src family kinases are normally maintained in an inactive state and can be activated transiently during cellular events such as mitosis. Different subcellular localizations of Src family kinases may be important for the regulation of specific cellular processes, such as mitogenesis, cytoskeletal organization and membrane trafficking. The Fyn and Lck Src family tyrosine kinases play a key role in T cell antigen receptor (TCR) signaling. The human LCK gene maps to chromosome 1p35.1 and encodes a 509 amino acid protein.

## REFERENCES

1. Sakaguchi, A.Y. 1983. Genetic organization of human proto-oncogenes. *Prog. Clin. Biol. Res.* 119: 93-103.
2. Williams, J.C., et al. 1998. Insights into Src kinase functions: structural comparisons. *Trends Biochem. Sci.* 23: 179-184.
3. Tatosyan, A.G. and Mizenina, O.A. 2000. Kinases of the Src family: structure and functions. *Biochemistry* 65: 49-58.
4. Bjorge, J.D., et al. 2000. Selected glimpses into the activation and function of Src kinase. *Oncogene* 19: 5620-5635.
5. Korade-Mirnic, Z. and Corey, S.J. 2000. Src kinase-mediated signaling in leukocytes. *J. Leukoc. Biol.* 68: 603-613.

## CHROMOSOMAL LOCATION

Genetic locus: LCK (human) mapping to 1p35.1; Lck (mouse) mapping to 4 D2.2.

## SOURCE

Lck (B-10) is a mouse monoclonal antibody raised against amino acids 1-95 mapping at the N-terminus of Lck of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## 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.

## APPLICATIONS

Lck (B-10) is recommended for detection of Lck p56 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 Lck siRNA (h): sc-29392, Lck siRNA (m): sc-35799, Lck shRNA Plasmid (h): sc-29392-SH, Lck shRNA Plasmid (m): sc-35799-SH, Lck shRNA (h) Lentiviral Particles: sc-29392-V and Lck shRNA (m) Lentiviral Particles: sc-35799-V.

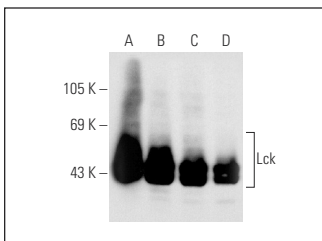
Molecular Weight of Lck: 56 kDa.

Positive Controls: CCRF-HSB-2 cell lysate: sc-2265, HuT 78 whole cell lysate: sc-2208 or Jurkat whole cell lysate: sc-2204.

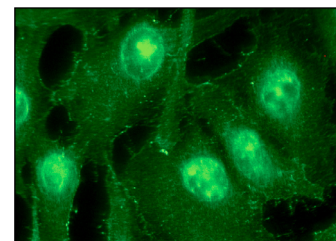
## RECOMMENDED SUPPORT REAGENTS

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



Lck (B-10): sc-166627. Western blot analysis of Lck expression in CCRF-HSB-2 (A), Jurkat (B), MOLT-4 (C) and HuT 78 (D) whole cell lysates.



Lck (B-10): sc-166627. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing membrane localization.

## SELECT PRODUCT CITATIONS

1. Singh, D.K., et al. 2017. Src family kinases in hamster spermatozoa: evidence for the presence of Lck. *Reproduction* 153: 655-669.
2. Zhao, S., et al. 2017. G-CSF inhibits LFA-1-mediated CD4<sup>+</sup> T cell functions by inhibiting Lck and ZAP-70. *Oncotarget* 8: 51578-51590.

## CONJUGATES

See **Lck (3A5): sc-433** for Lck antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.