

p-Lck (Tyr 394): sc-101728

BACKGROUND

The Src gene family of membrane-associated protein tyrosine kinases include c-Src, c-Yes, Fyn, Lck, Hck, Lyn, Blk and c-Fgr. The human Lck gene encodes a lymphocyte-specific tyrosine kinase designated pp56 Lck. Rearrangement and overexpression of the Lck gene occurs in select murine lymphomas. Human lymphomas and neuroblastomas frequently exhibit chromosomal abnormalities within a site in the genome that contains the Lck gene. Resting T cells contain high levels of the Lck protein and mRNA, both of which decline upon activation of T cells. Lck expression may contribute to the pathogenesis of some types of neoplastic disease. Csk phosphorylates Lck on Tyr 505. This phosphorylation event suppresses Lck catalytic activity under certain conditions. The phosphorylation of Lck at Tyr 394 stimulates Lck activity regardless of Tyr 505 phosphorylation status. In response to T cell antigen receptor binding and subsequent signaling, Lck undergoes phosphorylation on residues that include Tyr 192, Ser 59 and Ser 194.

REFERENCES

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- Hardwick, J.S. and Sefton, B.M. 1997. The activated form of the Lck tyrosine protein kinase in cells exposed to hydrogen peroxide is phosphorylated at both Tyr 394 and Tyr 505. *J. Biol. Chem.* 272: 25429-25432.
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CHROMOSOMAL LOCATION

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

RESEARCH USE

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

SOURCE

p-Lck (Tyr 394) is a rabbit polyclonal antibody raised against a short amino acid sequence containing phosphorylated Tyr 394 of Lck of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

p-Lck (Tyr 394) is recommended for detection of Tyr 394 phosphorylated Lck of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

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.

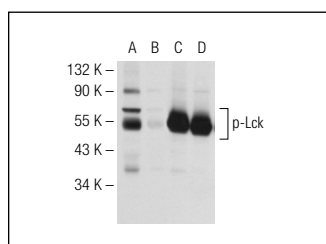
Molecular Weight of p-Lck: 56 kDa.

Positive Controls: CCRF-HSB-2 cell lysate: sc-2265 or MOLT-4 cell lysate: sc-2233.

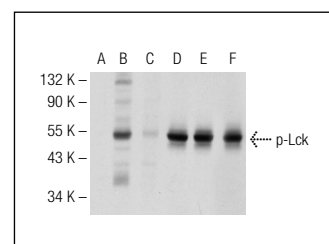
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Western Blotting Luminol Reagent: sc-2048 and Lambda Phosphatase: sc-200312A. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



Western blot analysis of Lck phosphorylation in un-treated (A,C) and lambda protein phosphatase (sc-200312A) treated (B,D) CCRF-HSB-2 whole cell lysates. Antibodies tested include p-Lck (Tyr 393): sc-101728 (A,B) and Lck (H-95): sc-28882 (C,D).



Western blot analysis of Lck phosphorylation in un-treated (A,D), pervanadate treated (B,E) and pervanadate and lambda protein phosphatase (sc-200312A) treated (C,F) Jurkat whole cell lysates. Antibodies tested include p-Lck (Tyr 393): sc-101728 (A,B,C) and Lck (H-95): sc-28882 (D,E,F).

STORAGE

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