

# Lsk/Ctk (H-1): sc-271174



The Power to Question

## BACKGROUND

All members of the Src gene family of tyrosine kinases are characterized by a carboxy-terminal domain tyrosine, Y527 in the case of Src p60, which is highly phosphorylated in the inactive form of the enzyme, while phosphorylated to a much lesser extent when the enzyme is active. For instance, a mutant of c-Src, in which Y527 is replaced by phenylalanine, is transforming and displays five to ten-fold elevated kinase activity compared to its normal counterpart. Csk has been identified as a Src related tyrosine kinase having both SH2 and SH3 domains and a catalytic domain but lacking sequences amino-terminal to the SH3 domain as well as the carboxy-terminal regulatory sequences. Csk phosphorylates Src on Y527 and also downregulates Lyn, Fyn and Lck by tyrosine phosphorylation of carboxy-terminal regulatory sites. A Csk-like protein-tyrosine kinase of mouse origin (Ctk), also designated Ntk, and its human homolog, Lsk, have also been described.

## REFERENCES

- Okada, M., et al. 1989. A protein tyrosine kinase involved in regulation of pp60<sup>c-src</sup> function. *J. Biol. Chem.* 264: 20886-20893.
- Nada, S., et al. 1991. Cloning of a complementary DNA for a protein-tyrosine kinase that specifically phosphorylates a negative regulatory site of pp60<sup>c-src</sup>. *Nature* 351: 69-72.
- Cooper, J.A., et al. 1993. The when and how of Src regulation. *Cell* 73: 1051-1054.
- Imamoto, A., et al. 1993. Disruption of the Csk gene, encoding a negative regulator of Src family tyrosine kinases, leads to neural tube defects and embryonic lethality in mice. *Cell* 73: 1117-1124.
- Nada, S., et al. 1993. Constitutive activation of Src family kinases in mouse embryos that lack Csk. *Cell* 73: 1125-1135.

## CHROMOSOMAL LOCATION

Genetic locus: MATK (human) mapping to 19p13.3; Matk (mouse) mapping to 10 C1.

## SOURCE

Lsk/Ctk (H-1) is a mouse monoclonal antibody raised against amino acids 171-257 mapping within an internal region of Lsk of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Lsk/Ctk (H-1) is available conjugated to agarose (sc-271174 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271174 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271174 PE), fluorescein (sc-271174 FITC), Alexa Fluor® 488 (sc-271174 AF488), Alexa Fluor® 546 (sc-271174 AF546), Alexa Fluor® 594 (sc-271174 AF594) or Alexa Fluor® 647 (sc-271174 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271174 AF680) or Alexa Fluor® 790 (sc-271174 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

Lsk/Ctk (H-1) is recommended for detection of Lsk of human origin and Ctk of mouse and rat 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), 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 Lsk siRNA (h): sc-38973, Ctk siRNA (m): sc-38972, Lsk shRNA Plasmid (h): sc-38973-SH, Ctk shRNA Plasmid (m): sc-38972-SH, Lsk shRNA (h) Lentiviral Particles: sc-38973-V and Ctk shRNA (m) Lentiviral Particles: sc-38972-V.

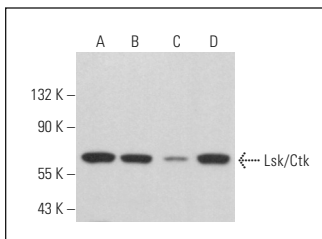
Molecular Weight of Lsk/Ctk: 57 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, EOC 20 whole cell lysate: sc-364187 or MEG-01 cell lysate: sc-2283.

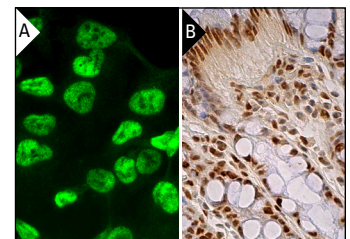
## RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



Lsk/Ctk (H-1): sc-271174. Western blot analysis of Lsk/Ctk expression in MEG-01 (A), Hep G2 (B), EOC 20 (C) and F9 (D) whole cell lysates.



Lsk/Ctk (H-1): sc-271174. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human rectum tissue showing nuclear and cytoplasmic staining of glandular cells (B).

## 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.