

Csk (CSK-04): sc-51580



The Power to Question

BACKGROUND

All members of the Src gene family of tyrosine kinases are characterized by a carboxy-terminal domain tyrosine which is highly phosphorylated in the inactive form of the enzyme and phosphorylated to a much lesser extent when the enzyme is active. In the case of Src p60, Y527 is this tyrosine; however, a mutant form of c-Src in which Y527 is replaced by phenylalanine is transforming and displays 5- to 10-fold elevated kinase activity compared to its normal counterpart. Csk has been identified as an 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 carboxy-terminal regulatory sequences. Csk phosphorylates Src on Y527 and also downregulates Lyn, Fyn and Lck by tyrosine phosphorylation of carboxy-terminal regulatory sites.

REFERENCES

1. Okada, M. and Nakagawa, H. 1989. A protein tyrosine kinase involved in regulation of pp60c-Src function. *J. Biol. Chem.* 264: 20886-20893.
2. Nada, S., et al. 1991. Cloning of a complementary DNA for a protein-tyrosine kinase that specifically phosphorylates a negative regulatory site of p60c-Src. *Nature* 351: 69-72.
3. Cooper, J.A. and Howell, B. 1993. The when and how of Src regulation. *Cell* 73: 1051-1054.
4. Imamoto, A. and Sorlano, P. 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.
5. Nada, S., et al. 1993. Constitutive activation of Src family kinases in mouse embryos that lack Csk. *Cell* 73: 1125-1135.
6. Superti-Furga, G., et al. 1993. Csk inhibition of c-Src activity requires both the SH2 and SH3 domains of Src. *EMBO J.* 12: 2625-2634.
7. Chow, L.M., et al. 1993. Negative regulation of T cell receptor signalling by tyrosine protein kinase p50 Csk. *Nature* 365: 156-159.
8. Bräuninger, A., et al. 1993. Characterization of the human Csk locus. *Oncogene* 8: 1365-1369.

CHROMOSOMAL LOCATION

Genetic locus: CSK (human) mapping to 15q24.1; Csk (mouse) mapping to 9 B.

SOURCE

Csk (CSK-04) is a mouse monoclonal antibody raised against amino acids 330-450 of Csk of human origin.

PRODUCT

Each vial contains IgG₁ in 100 µl 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.

APPLICATIONS

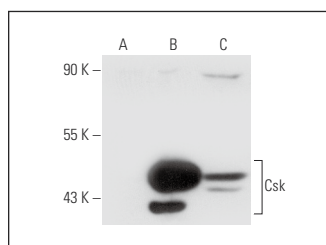
Csk (CSK-04) is recommended for detection of Csk of mouse, rat and human origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µl per 100-500 µg of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for Csk siRNA (h): sc-39161, Csk siRNA (m): sc-38971, Csk shRNA Plasmid (h): sc-39161-SH, Csk shRNA Plasmid (m): sc-38971-SH, Csk shRNA (h) Lentiviral Particles: sc-39161-V and Csk shRNA (m) Lentiviral Particles: sc-38971-V.

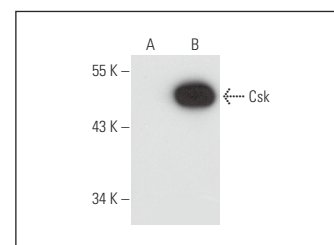
Molecular Weight of Csk: 50 kDa.

Positive Controls: Csk (m): 293T Lysate: sc-119481, Jurkat whole cell lysate: sc-2204 or Csk (h): 293T Lysate: sc-111742.

DATA



Csk (CSK-04): sc-51580. Western blot analysis of Csk expression in non-transfected 293T: sc-117752 (A), mouse Csk transfected 293T: sc-119481 (B) and Jurkat (C) whole cell lysates.



Csk (CSK-04): sc-51580. Western blot analysis of Csk expression in non-transfected: sc-117752 (A) and human Csk transfected: sc-111742 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Palomero, T., et al. 2014. Recurrent mutations in epigenetic regulators, RHOA and FYN kinase in peripheral T cell lymphomas. *Nat. Genet.* 46: 166-170.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.