SANTA CRUZ BIOTECHNOLOGY, INC.

Csk (6A399): sc-70889

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.
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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., Yagi, T., Takeda, H., Tokunaga, T., Nakagawa, H., Ikawa, Y., Okada, M. and Aizawa, S. 1993. Constitutive activation of Src family kinases in mouse embryos that lack Csk. Cell 73: 1125-1135.
6. Superti-Furga, G., Fumagalli, S., Koegl, M., Courtneidge, S.A. and Draetta, G. 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., Fournel, M., Davidson, D. and Viellette, A. 1993. Negative regulation of T cell receptor signalling by tyrosine protein kinase p50 Csk. Nature 365: 156-159.
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CHROMOSOMAL LOCATION

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

SOURCE

Csk (6A399) is a mouse monoclonal antibody raised against amino acids 330-450 of Csk of human origin.

PRODUCT

Each vial contains IgG_1 in 100 µl PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Csk (6A399) is recommended for detection of Csk of mouse and human origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg (approximately 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 and Csk siRNA (m): sc-38971.

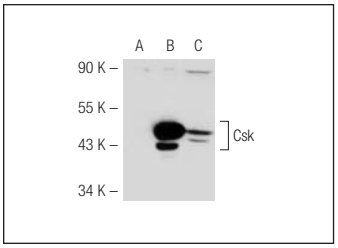
Molecular Weight of Csk: 50 kDa.

Positive Controls: normal human spleen, Jurkat whole cell lysate: sc-2204 or BC3H1 cell lysate: sc-2299.

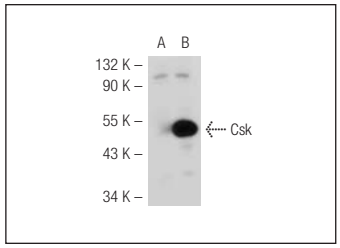
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



Csk (6A399): sc-70889. 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 (6A399): sc-70889. Western blot analysis of Csk expression in non-transfected: sc-117752 (**A**) and human Csk transfected: sc-111742 (**B**) 293T whole cell lysates.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

RESEARCH USE

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

PROTOCOLS

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