

Csk (E-3): sc-166560



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

- Okada, M. and Nakagawa, H. 1989. A protein tyrosine kinase involved in regulation of pp60^{c-Src} 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 p60^{c-Src}. *Nature* 351: 69-72.
- 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.

CHROMOSOMAL LOCATION

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

SOURCE

Csk (E-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 420-450 at the C-terminus of Csk of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Csk (E-3) is available conjugated to agarose (sc-166560 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166560 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166560 PE), fluorescein (sc-166560 FITC), Alexa Fluor® 488 (sc-166560 AF488), Alexa Fluor® 546 (sc-166560 AF546), Alexa Fluor® 594 (sc-166560 AF594) or Alexa Fluor® 647 (sc-166560 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166560 AF680) or Alexa Fluor® 790 (sc-166560 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-166560 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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STORAGE

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

APPLICATIONS

Csk (E-3) is recommended for detection of Csk p50 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), 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).

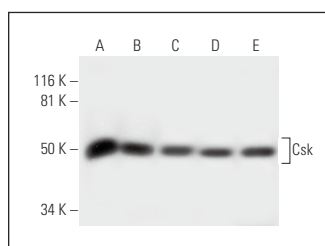
Csk (E-3) is also recommended for detection of Csk p50 in additional species, including canine and porcine.

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.

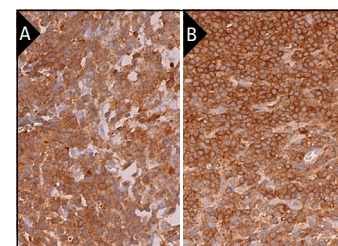
Molecular Weight of Csk: 50 kDa.

Positive Controls: AML-193 whole cell lysate: sc-364182, Jurkat whole cell lysate: sc-2204 or CTLL-2 cell lysate: sc-2242.

DATA



Csk (E-3): sc-166560. Western blot analysis of Csk expression in Jurkat (A), AML-193 (B), EOC 20 (C), BC₃H1 (D) and CTLL-2 (E) whole cell lysates.



Csk (E-3): sc-166560. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node (A) and human tonsil (B) tissue showing cytoplasmic staining of cells in germinal center and cells non-germinal center.

SELECT PRODUCT CITATIONS

- Xu, X., et al. 2020. PD-1 and BTLA regulate T cell signaling differentially and only partially through SHP1 and SHP2. *J. Cell Biol.* 219: e201905085.
- Rahmani, Z. and Safari, F. 2021. Evaluating the *in vitro* therapeutic effects of human amniotic mesenchymal stromal cells on MiaPaca2 pancreatic cancer cells using 2D and 3D cell culture model. *Tissue Cell* 68: 101479.
- Alidoust Saharkhiz Lahiji, M. and Safari, F. 2022. Potential therapeutic effects of hAMSCs secretome on Panc1 pancreatic cancer cells through downregulation of Sgk269, E-cadherin, vimentin, and snail expression. *Biologicals* 76: 24-30.
- Mitani, F., et al. 2022. SNAP23-mediated perturbation of cholesterol-Enriched membrane microdomain promotes extracellular vesicle production in Src-activated cancer cells. *Biol. Pharm. Bull.* 45: 1572-1580.

RESEARCH USE

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