

p-c-Src (Tyr 139): sc-22126

BACKGROUND

The major translational products of the Src gene family are membrane-associated tyrosine protein kinases that lack transmembrane and external amino acid sequences. By virtue of their common structural motifs, the Src family is composed of nine members in vertebrates, including c-Src, c-Yes, Fgr, Yrk, Fyn, Lyn, Hck, Lck and Blk. Src family kinases, which contain an amino-terminal cell membrane anchor followed by SH3 and SH2 domains, transduce signals that are involved in the control of a variety of cellular processes, including proliferation, differentiation, motility and adhesion. Src family members are normally maintained in an inactive state and can be activated transiently during cellular events such as mitosis. Different subcellular locations of Src family kinases may be important for the regulation of specific cellular processes, such as mitogenesis, cytoskeletal organization and membrane trafficking. c-Src (also designated pp60Src, Src p60 and proto-oncogene tyrosine protein kinase Src) is expressed in a broad range of tissue and cell types, although the highest levels of c-Src are detected in neuronal tissues and platelets. c-Src may play a role in events associated with both neuronal differentiation and maintenance of mature neuronal cell functions.

REFERENCES

1. Brugge, J.S., et al. 1985. Neurons express high levels of structurally modified, activated form of pp60Src. *Nature* 316: 554-557.
2. Golden, A., et al. 1986. Blood platelets express high levels of the pp60Src-specific tyrosine kinase activity. *Proc. Natl. Acad. Sci. USA* 83: 852-856.
3. Cartwright, C.A., et al. 1987. Alterations in pp60Src accompany differentiation of neurons from rat embryo striatum. *Mol. Cell. Biol.* 7: 1830-1840.
4. Wiestler, O.D. and Walter, G. 1988. Developmental expression of two forms of pp60Src in mouse brain. *Mol. Cell. Biol.* 8: 502-504.
5. Eiseman, E. and Bolen, J.B. 1990. Src-related tyrosine protein kinases as signaling components in hematopoietic cells. *Cancer Cells* 2: 303-310.

CHROMOSOMAL LOCATION

Genetic locus: SRC (human) mapping to 20q11.23; Src (mouse) mapping to 2 H1.

SOURCE

p-c-Src (Tyr 139) is available as either goat (sc-22126) or rabbit (sc-22126-R) polyclonal affinity purified antibody raised against a short amino acid sequence containing phosphorylated Tyr 139 of c-Src of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-22126 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

p-c-Src (Tyr 139) is recommended for detection of Tyr 139 phosphorylated c-Src of human and rat origin, and Tyr 144 phosphorylated c-Src of mouse origin by Western Blotting (starting dilution 1:200, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); also recommended for detection of correspondingly phosphorylated Fyn and c-Fgr.

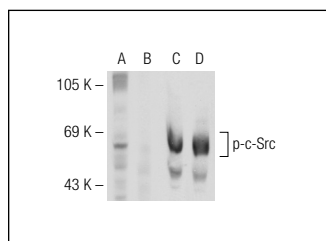
p-c-Src (Tyr 139) is also recommended for detection of correspondingly phosphorylated Tyr on c-Src in additional species, including canine.

Suitable for use as control antibody for c-Src siRNA (h): sc-29228, c-Src siRNA (m): sc-29859, c-Src shRNA Plasmid (h): sc-29228-SH, c-Src shRNA Plasmid (m): sc-29859-SH, c-Src shRNA (h) Lentiviral Particles: sc-29228-V and c-Src shRNA (m) Lentiviral Particles: sc-29859-V.

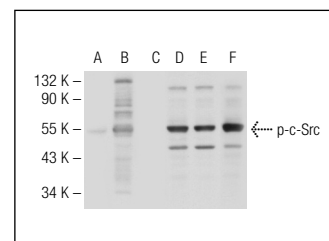
Molecular Weight of p-c-Src: 60 kDa.

Positive Controls: Jurkat + pervanadate cell lysate: sc-24716, pervanadate stimulated HEK293 whole cell lysate or EGF treated HEK293 whole cell lysate.

DATA



Western blot analysis of c-Src phosphorylation in untreated (A, C) and lambda protein phosphatase treated (B, D) A549 whole cell lysates. Antibodies tested include p-c-Src (Tyr 139)-R: sc-22126-R (A, B) and c-Src (SRC 2): sc-18 (C, D).



Western blot analysis of c-Src phosphorylation in untreated (A, D), pervanadate treated (B, E) and pervanadate and lambda protein phosphatase treated (C, F) Jurkat whole cell lysates. Antibodies tested include p-c-Src (Tyr 139)-R: sc-22126-R (A, B, C) and c-Src (17AT28): sc-130124 (D, E, F).

SELECT PRODUCT CITATIONS

1. Francis, H., et al. 2004. cAMP stimulates the secretory and proliferative capacity of the rat intrahepatic biliary epithelium through changes in the PKA/Src/MEK/ERK 1/2 pathway. *J. Hepatol.* 41: 528-537.
2. Taffetani, S., et al. 2005. Tannic acid inhibits cholangiocyte proliferation after bile duct ligation via a cyclic adenosine 5', 3'-monophosphate-dependent pathway. *Am. J. Pathol.* 166: 1671-1680.

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.