SANTA CRUZ BIOTECHNOLOGY, INC.

p-c-Src (Tyr 419): sc-101802

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. Sakaguchi, A.Y. 1982. Organization of human proto-oncogenes. Prog. Clin. Biol. Res. 119: 93-103.
2. Brugge, J.S., et al. 1985. Neurons express high levels of structurally modified, activated form of pp60Src. Nature 316: 554-557.
3. Golden, A., et al. 1986. Blood platelets express high levels of the pp60c-src-specific tyrosine kinase activity. Proc. Natl. Acad. Sci. USA 83: 852-856.
4. Cartwright, C.A., et al. 1987. Alterations in pp60Src accompany differentiation of neurons from rat embryo striatum. Mol. Cell. Biol. 7: 1830-1840.
5. Wiestler, O.D. and Walter, G. 1988. Developmental expression of two forms of pp60Src in mouse brain. Mol. Cell. Biol. 8: 502-504.
6. 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 419) is a rabbit polyclonal antibody raised against a short amino acid sequence containing Tyr 419 phosphorylated c-Src of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml 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

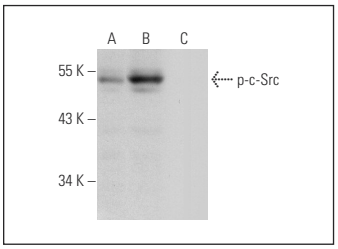
p-c-Src (Tyr 419) is recommended for detection of Tyr 419 phosphorylated c-Src of human and rat origin, Tyr 424 phosphorylated c-Src of mouse origin, and Tyr 416 phosphorylated c-Src of chicken origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500); also recommended for detection of correspondingly phosphorylated Fyn, c-Yes, Lyn, Lck, and Hck of human, mouse, and rat origin.

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, A549 cell lysate: sc-2413 or HEK293 whole cell lysate: sc-45136.

DATA



p-c-Src (Tyr 419): sc-101802. Western blot analysis of c-Src phosphorylation in untreated (**A**), pervanadate treated (**B**) and pervanadate and lambda protein phosphatase treated (**C**) Jurkat whole cell lysates.

SELECT PRODUT CITATIONS

1. Vallabhaneni, S., et al. 2010. Significance of ER-Src axis in hormonal therapy resistance. Breast Cancer Res. Treat. 130: 377-385.
2. Sandoval, Y.H., et al. 2011. Transactivation of epidermal growth factor receptor by enhanced levels of endogenous angiotensin II contributes to the overexpression of $G_{i\alpha}$ proteins in vascular smooth muscle cells from SHR. Cell. Signal. 23: 1716-1726.
3. Gusan, S. and Anand-Srivastava, M.B. 2013. cAMP attenuates the enhanced expression of G_i proteins and hyperproliferation of vascular smooth muscle cells from SHR: role of ROS and ROS-mediated signaling. Am. J. Physiol., Cell Physiol. 304: C1198-C1209.

RESEARCH USE

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