

p-c-Src (Tyr 216): sc-16844

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 pp60Src-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. Eisman, E. and Bolen, J.B. 1990. Src-related tyrosine protein kinases as signaling components in hematopoietic cells. *Cancer Cells* 2: 303-310.
7. Bolen, J.B., et al. 1991. Expression and interactions of the Src family of tyrosine protein kinases in T lymphocytes. *Adv. Cancer Res.* 57: 103-149.
8. Broome, M.A. and Hunter, T. 1997. The PDGF receptor phosphorylates Tyr 138 in the c-Src domain *in vivo* reducing peptide ligand binding. *Oncogene* 14: 17-34.
9. Gilmore, E.S., et al. 2001. Src family kinases mediate epithelial Na⁺ channel inhibition by endothelin. *J. Biol. Chem.* 276: 42610-42617.

CHROMOSOMAL LOCATION

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

SOURCE

p-c-Src (Tyr 216) is available as either goat (sc-16844) or rabbit (sc-16844-R) polyclonal affinity purified antibody raised against a short amino acid sequence containing Tyr 216 phosphorylated 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-16844 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

p-c-Src (Tyr 216) is recommended for detection of Tyr 216 phosphorylated c-Src of human and rat origin, and Tyr 221 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).

p-c-Src (Tyr 216) is also recommended for detection of correspondingly phosphorylated c-Src in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for c-Src siRNA (h): sc-29228, c-Src siRNA (m): sc-29859, c-Src siRNA (r): sc-270199, c-Src shRNA Plasmid (h): sc-29228-SH, c-Src shRNA Plasmid (m): sc-29859-SH, c-Src shRNA Plasmid (r): sc-270199-SH, c-Src shRNA (h) Lentiviral Particles: sc-29228-V, c-Src shRNA (m) Lentiviral Particles: sc-29859-V and c-Src shRNA (r) Lentiviral Particles: sc-270199-V.

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

Positive Controls: HEK293 whole cell lysate: sc-45136, Jurkat whole cell lysate: sc-2204 or Jurkat + pervanadate cell lysate: sc-24716.

SELECT PRODUCT CITATIONS

1. Chung, C.H., et al. 2009. The integrin $\alpha 2 \beta 1$ agonist, aggretin, promotes proliferation and migration of VSMC through NF κ B translocation and PDGF production. *Br. J. Pharmacol.* 156: 846-856.
2. Lin, K.T., et al. 2012. Bp5250 inhibits vascular endothelial growth factor-induced angiogenesis and HIF-1 α expression on endothelial cells. *Naunyn-Schmiedeberg Arch. Pharmacol.* 385: 39-49.

STORAGE

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

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.