SANTA CRUZ BIOTECHNOLOGY, INC.

c-Src (B-12): sc-8056

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.

SOURCE

c-Src (B-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 506-537 at the C-terminus of c-Src of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

c-Src (B-12) is available conjugated to agarose (sc-8056 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-8056 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-8056 PE), fluorescein (sc-8056 FITC), Alexa Fluor® 488 (sc-8056 AF488), Alexa Fluor® 546 (sc-8056 AF546), Alexa Fluor® 594 (sc-8056 AF594) or Alexa Fluor® 647 (sc-8056 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-8056 AF680) or Alexa Fluor® 790 (sc-8056 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-8056 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

c-Src (B-12) is recommended for detection of c-Src, Yes p62, Fyn p59, c-Fgr p55 and c-Src-2 of mouse, rat and human 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), 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).

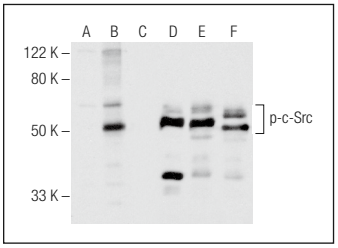
Molecular Weight of c-Src: 60 kDa.

Positive Controls: WEHI-231 whole cell lysate: sc-2213, Jurkat whole cell lysate: sc-2204 or HeLa whole cell lysate: sc-2200.

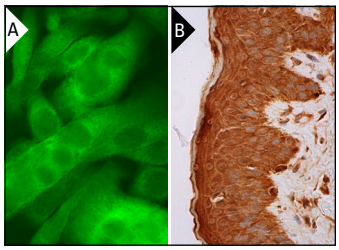
STORAGE

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

DATA



Western blot analysis of c-Src phosphorylation in untreated (**A**,**D**), Ser/Thr induction cocktail (sc-362324) treated (**B**,**E**) and Ser/Thr induction cocktail (sc-362324) and lambda protein phosphatase (sc-200312A) treated (**C**,**F**) Jurkat whole cell lysates. Antibodies tested include p-c-Src (Thr 420)-R: sc-16845-R (**A**,**B**,**C**) and c-Src (B-12): sc-8056 (**D**,**E**,**F**).



c-Src (B-12) Alexa Fluor® 488: sc-8056 AF488. Direct immunofluorescence staining of formalin-fixed SW480 cells showing cytoplasmic and membrane localization. Blocked with UltraCruz® Blocking Reagent: sc-516214 (**A**). c-Src (B-12): sc-8056. Immunoperoxidase staining of formalin fixed, paraffin-embedded human skin tissue showing cytoplasmic and nuclear staining of keratinocytes, fibroblasts, Langerhans cells and melanocytes (**B**).

SELECT PRODUCT CITATIONS

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3. Drummond, C.A., et al. 2018. Na/K-ATPase signaling mediates miR-29b-3p regulation and cardiac fibrosis formation in mice with chronic kidney disease. PLoS ONE 13: e0197688.
4. Zhao, G., et al. 2019. Cullin5 deficiency promotes small-cell lung cancer metastasis by stabilizing integrin β1. J. Clin. Invest. 129: 972-987.
5. Song, L., et al. 2020. Proto-oncogene Src links lipogenesis via lipin-1 to breast cancer malignancy. Nat. Commun. 11: 5842.
6. Seo, S.I., et al. 2021. HOTAIR induces methylation of PCDH10, a tumor suppressor gene, by regulating DNMT1 and sponging with miR-148b in gastric adenocarcinoma. Yonsei Med. J. 62: 118-128.
7. Nam, H.J., et al. 2022. GPR110 promotes progression and metastasis of triple-negative breast cancer. Cell Death Discov. 8: 271.
8. Wang, C., et al. 2023. Dipeptidylpeptidase 4 promotes survival and stemness of acute myeloid leukemia stem cells. Cell Rep. 42: 112105.
9. Lee, Y.B., et al. 2024. Function of a complex of p-Y42 RhoA GTPase and pyruvate kinase M2 in EGF signaling pathway in glioma cells. J. Neurochem. 169: e16210.

RESEARCH USE

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