SANTA CRUZ BIOTECHNOLOGY, INC.

c-Abl (SPM328): sc-52990

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

BACKGROUND

The Abl oncogene was initially identified as the viral transforming gene of Abelson murine leukemia virus (A-MuLV). The major translational product of c-Abl has been identified as a protein with tyrosine kinase activity and an SH2 domain. The Abl oncogene is implicated in several human leukemias including 90-95% of chronic myelocytic leukemia (CML), 20-25% of adult acute lymphoblastic leukemia (ALL) and 2-5% of pediatric ALL. In these leukemias the c-Abl proto-oncogene undergoes a (9;22) chromosomal translocation producing the Philadelphia (Ph1) chromosome. The molecular consequence of this translocation is the generation of a chimeric Bcr/c-Abl mRNA encoding activated Abl protein-tyrosine kinase. The Bcr gene has been shown to encode a GTPase-activating protein (GAP) specific for the Ras-related GTP-binding protein, $p21^{rac}$.

CHROMOSOMAL LOCATION

Genetic locus: ABL1 (human) mapping to 9q34.12, BCR (human) mapping to 22q11.23; Abl1 (mouse) mapping to 2 B, Bcr (mouse) mapping to 10 B5.3.

SOURCE

c-Abl (SPM328) is a mouse monoclonal antibody raised against full length recombinant c-Abl, with epitope mapping to the SH2 domain.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of 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

c-Abl (SPM328) is recommended for detection of c-Abl p120 and chimeric Bcr/Abl proteins 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).

Suitable for use as control antibody for c-Abl siRNA (h): sc-29843, c-Abl siRNA (m): sc-29844, c-Abl siRNA (r): sc-270357, c-Abl shRNA Plasmid (h): sc-29843-SH, c-Abl shRNA Plasmid (m): sc-29844-SH, c-Abl shRNA Plasmid (r): sc-270357-SH, c-Abl shRNA (h) Lentiviral Particles: sc-29843-V, c-Abl shRNA (m) Lentiviral Particles: sc-29844-V and c-Abl shRNA (r) Lentiviral Particles: sc-270357-V.

Molecular Weight of c-Abl: 120 kDa.

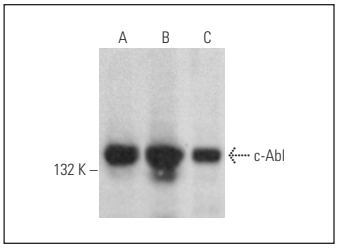
Molecular Weight of Bcr/Abl fusion protein: 210 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, MOLT-4 cell lysate: sc-2233 or RAW 264.7 whole cell lysate: sc-2211.

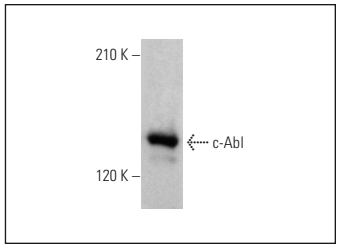
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



c-Abl (SPM328): sc-52990. Western blot analysis of c-Abl expression in HeLa (**A**), MOLT-4 (**B**) and RAW 264.7 (**C**) whole cell lysates.



c-Abl (SPM328): sc-52990. Western blot analysis of c-Abl expression in K-562 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Marley, S.B., et al. 2004. Phosphatidylinositol-3 kinase inhibitors reproduce the selective antiproliferative effects of imatinib on chronic myeloid leukaemia progenitor cells. Br. J. Haematol. 125: 500-511.
2. Nakamura, S., et al. 2011. Small GTPase RAB45-mediated p38 activation in apoptosis of chronic myeloid leukemia progenitor cells. Carcinogenesis 32: 1758-1772.
3. Nakamura, S., et al. 2012. Down-regulation of Thanatos-associated protein 11 by Bcr-Abl promotes CML cell proliferation through c-Myc expression. Int. J. Cancer 130: 1046-1059.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

CONJUGATES

See **c-Abl (8E9): sc-56887** for c-Abl antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647.