

p-c-Abl/Arg (Tyr 393/439): sc-293096

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 chronic myelocytic leukemia (CML), in which it undergoes a (9;22) chromosomal translocation and produces 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 related protein tyrosine kinase Arg, also designated Abl2, contains an SH2 and an SH3 domain. Arg has been shown to interact with and to phosphorylate c-Crk. Both c-Abl and Arg undergo post-translational phosphorylation on multiple amino acid residues.

REFERENCES

1. Abelson, H.T., et al. 1970. Lymphosarcoma: virus-induced thymic-independent disease in mice. *Cancer Res.* 30: 2213-2222.
2. de Klein, A., et al. 1982. A cellular oncogene is translocated to the Philadelphia chromosome in chronic myelocytic leukemia. *Nature* 300: 765-767.
3. Prywes, R., et al. 1983. Sequences of the A-MuLV protein needed for fibro-blasts and lymphoid cell transformation. *Cell* 34: 569-579.
4. Konopka, J.B., et al. 1984. An alteration of the human c-Abl protein in K-562 leukemia cells unmasks associated tyrosine kinase activity. *Cell* 37: 1035-1042.
5. Stam, K., et al. 1985. Evidence of a new chimeric Bcr/c-Abl mRNA in patients with chronic myelocytic leukemia and the Philadelphia chromosome. *N. Engl. J. Med.* 313: 1429-1433.
6. Diekmann, D., et al. 1991. Bcr encodes a GTPase-activating protein for p21Rac. *Nature* 351: 400-402.
7. Overduin, M., et al. 1992. Three-dimensional solution structure of the Src homology 2 domain of c-Abl. *Cell* 70: 697-704.

CHROMOSOMAL LOCATION

Genetic locus: ABL1 (human) mapping to 1q25.2, ABL2 (human) mapping to 1q25.2.

SOURCE

p-c-Abl/Arg (Tyr 393/439) is a rabbit polyclonal antibody raised against a short amino acid sequence containing phosphorylated Tyr 393/439 of c-Abl/Arg 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-Abl/Arg (Tyr 393/439) is recommended for detection of Tyr 393 phosphorylated c-Abl and correspondingly phosphorylated Tyr 439 Arg of mouse 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) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

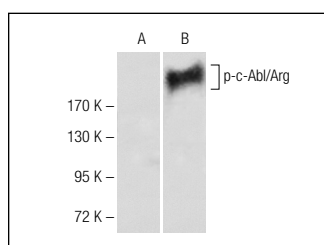
Molecular Weight of p-c-Abl/Arg: 145 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209.

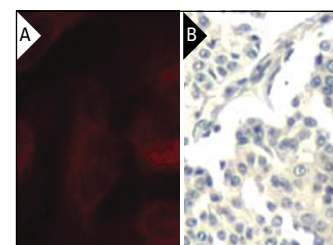
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent) 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



Western blot analysis of c-Abl/Arg phosphorylation expression in HL-60 whole cell lysate (A,B). Blots were probed with p-c-Abl/Arg (Tyr 393/439): sc-293096 preincubated with cognate phosphorylated peptide (A,B).



p-c-Abl/Arg (Tyr 393/439): sc-293096. Immunofluorescence staining of methanol-fixed HeLa cells (A) showing cytoplasmic localization and immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast carcinoma tissue (B) showing cytoplasmic localization.

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.