

p-Bcr (Tyr 177): sc-101645

BACKGROUND

The Bcr gene, mapping on chromosome 22, was initially identified on the basis of its fusion with the c-Abl proto-oncogene on chromosome 9, resulting in the generation of the Philadelphia chromosome in 90-95% of patients with chronic myelogenous leukemia (CML). The Bcr gene encodes for the breakpoint cluster region (Bcr) protein. A consequence of this translocation is the generation of a Bcr/c-Abl mRNA encoding an activated c-Abl protein kinase. The Bcr gene has been shown to encode a GTPase-activating protein (GAP) specific for the Ras-related GTP-binding protein, Rac 1 p21. While it has been speculated that the Bcr protein may also stimulate Rac 2 p21 GTPase activity, it has no effect on Ras p21 or Rho p21 GTPases. It is of interest that the GAP domain of Bcr maps outside of the region that remains on chromosome 22 (Philadelphia chromosome) in CML.

REFERENCES

1. de Klein, A., et al. 1982. A cellular oncogene is translocated to the Philadelphia chromosome in chronic myelocytic leukemia. *Nature* 300: 765-767.
2. Konopka, J.B., et al. 1984. An alteration of the human c-Abl protein in K-562 leukemic cells unmasks associated tyrosine kinase activity. *Cell* 37: 1035-1042.
3. 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.
4. Stam, K., et al. 1987. Evidence that the phl gene encodes a 160,000 dalton phosphoprotein with associated kinase activity. *Mol. Cell. Biol.* 7: 1955-1960.
5. Wiedmann, L.M., et al. 1988. The correlation of Bcr rearrangement of P210 phl/c-Abl expression with morphological analysis of Ph negative CML and other myeloproliferative diseases. *Blood* 71: 349-355.
6. Dhut, S., et al. 1988. Identification of two normal Bcr gene products in the cytoplasm. *Oncogene* 3: 561-566.
7. Diekmann, D., et al. 1991. Bcr encodes a GTPase-activating protein for p21rac. *Nature* 351: 400-402.

CHROMOSOMAL LOCATION

Genetic locus: BCR (human) mapping to 22q11.23; Bcr (mouse) mapping to 10 B5.3.

SOURCE

p-Bcr (Tyr 177) is a rabbit polyclonal antibody raised against a short amino acid sequence containing phosphorylated Tyr 177 of Bcr of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

p-Bcr (Tyr 177) is recommended for detection of Tyr 177 phosphorylated Bcr of human origin, correspondingly phosphorylated Tyr 178 of mouse origin and correspondingly phosphorylated Tyr 108 of rat 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 and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Bcr siRNA (h): sc-29795 and Bcr siRNA (m): sc-29796.

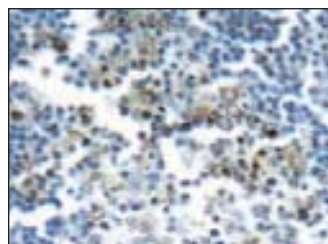
Molecular Weight of p-Bcr: 160 kDa.

Positive Controls: A-431 + EGF nuclear extract: sc-2124 or human tonsil tumor tissue.

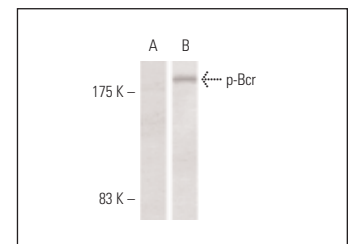
RECOMMENDED SECONDARY REAGENTS

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



p-Bcr (Tyr 177): sc-101645. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human tonsil tumor tissue extract showing cytoplasmic staining.



p-Bcr (Tyr 177): sc-101645. Western blot analysis of phosphorylated p-Bcr expression in untreated (A) and EGF-treated (B) A-431 whole cell lysates.

STORAGE

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

PROTOCOLS

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