

# Bcr (B-12): sc-28375

## 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 protein (Bcr). 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 pbl gene encodes a 160,000 dalton phosphoprotein with associated kinase activity. *Mol. Cell. Biol.* 7: 1955-1960.

## CHROMOSOMAL LOCATION

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

## SOURCE

Bcr (B-12) is a mouse monoclonal antibody raised against amino acids 1-300 (deletion 17-219) of Bcr of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Bcr (B-12) is available conjugated to agarose (sc-28375 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-28375 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-28375 PE), fluorescein (sc-28375 FITC), Alexa Fluor® 488 (sc-28375 AF488), Alexa Fluor® 546 (sc-28375 AF546), Alexa Fluor® 594 (sc-28375 AF594) or Alexa Fluor® 647 (sc-28375 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-28375 AF680) or Alexa Fluor® 790 (sc-28375 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## RESEARCH USE

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

## APPLICATIONS

Bcr (B-12) is recommended for detection of Bcr of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for Bcr siRNA (h): sc-29795, Bcr siRNA (m): sc-29796, Bcr shRNA Plasmid (h): sc-29795-SH, Bcr shRNA Plasmid (m): sc-29796-SH, Bcr shRNA (h) Lentiviral Particles: sc-29795-V and Bcr shRNA (m) Lentiviral Particles: sc-29796-V.

Molecular Weight of Bcr: 160 kDa.

Molecular Weight of Bcr in Philadelphia-positive leukemia: 130 kDa.

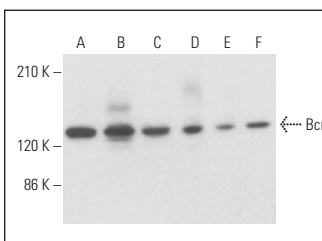
Molecular Weight of Bcr/Abl fusion proteins: 190/210 kDa.

Positive Controls: SUP-T1 whole cell lysate: sc-364796, TF-1 cell lysate: sc-2412 or C2C12 whole cell lysate: sc-364188.

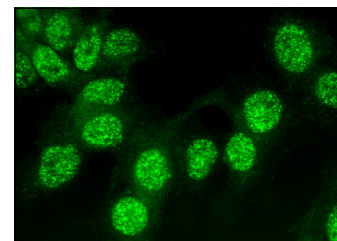
## RECOMMENDED SUPPORT REAGENTS

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, UltraCruz® Blocking Reagent: sc-516214 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



Bcr (B-12): sc-28375. Western blot analysis of Bcr expression in Y79 (A), SUP-T1 (B), TF-1 (C), TK-1 (D), C2C12 (E) and A-10 (F) whole cell lysates.



Bcr (B-12): sc-28375. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nuclear localization.

## 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](http://www.scbt.com) for detailed protocols and support products.

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