

Bcr (H-5): sc-48422

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 K562 leukemic cells unmasks associated tyrosine kinase activity. *Cell* 37: 1035-1042.

CHROMOSOMAL LOCATION

Genetic locus: BCR (human) mapping to 22q11.23.

SOURCE

Bcr (H-5) is a mouse monoclonal antibody raised against amino acids 1-300 (deletion 17-219) mapping at the N-terminus of Bcr of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain 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

Bcr (H-5) is recommended for detection of Bcr of 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 shRNA Plasmid (h): sc-29795-SH and Bcr shRNA (h) Lentiviral Particles: sc-29795-V.

Molecular Weight of Bcr: 160 kDa.

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

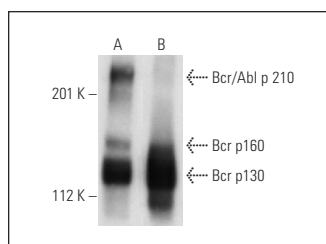
Molecular Weight of Bcr/Abl fusion proteins: 190/210 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, HeLa whole cell lysate: sc-2200 or BJAB whole cell lysate: sc-2207.

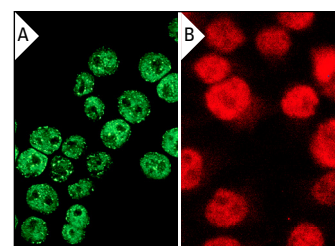
RECOMMENDED SUPPORT REAGENTS

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 (H-5): sc-48422. Western blot analysis of Bcr expression in K-562 (A) and BJAB (B) whole cell lysates.



Bcr (H-5): sc-48422. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization (A) and cytoplasmic localization (B).

SELECT PRODUCT CITATIONS

1. Ting, P.Y., et al. 2015. Identification of small molecules that disrupt signaling between Abl and its positive regulator RIN1. *PLoS ONE* 10: e0121833.
2. Gómez-Massa, E., et al. 2020. Number and function of circulatory helper innate lymphoid cells are unaffected by immunosuppressive drugs used in solid organ recipients. *Transpl. Int.* E-published.

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 for detailed protocols and support products.

CONJUGATES

See **Bcr (B-12): sc-28375** for Bcr antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.