SANTA CRUZ BIOTECHNOLOGY, INC.

Bcr (C-20): sc-886

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 break-point 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.

CHROMOSOMAL LOCATION

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

SOURCE

Bcr (C-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of Bcr of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-886 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Bcr (C-20) is recommended for detection of Bcr 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); non cross-reactive with Bcr/Abl fusion proteins.

Bcr (C-20) is also recommended for detection of Bcr in additional species, including canine, bovine, porcine and avian.

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.

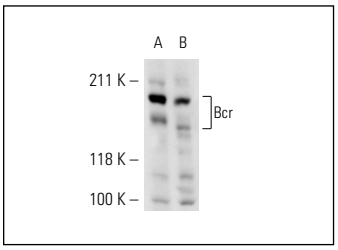
Molecular Weight of Bcr/Abl fusion proteins: 190/210 kDa.

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

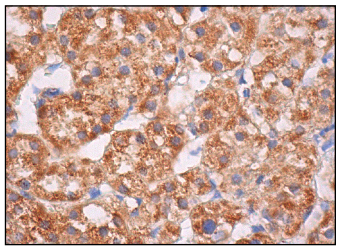
STORAGE

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

DATA



Bcr (C-20): sc-886. Western blot analysis of Bcr expression in K-562 (**A**) and HeLa (**B**) whole cell lysates.



Bcr (C-20): sc-886. Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Konstantinov, S.M., et al. 2002. Combination with an antisense oligo-nucleotide synergistically improves the antileukemic efficacy of erucyl-phospho-N,N,N-trimethylpropylammonium in chronic myeloid leukemia cell lines. Mol. Cancer Ther. 1: 877-884.
2. Radziwill, G., et al. 2003. The Bcr kinase downregulates Ras signaling by phosphorylating AF-6 and binding to its PDZ domain. Mol. Cell. Biol. 23: 4663-4672.
3. Malmberg, E.K., et al. 2004. Bcr (breakpoint cluster region) protein binds to PDZ domains of scaffold protein PDZK1 and vesicle coat protein Mint3. J. Cell Sci. 117: 5535-5541.
4. Ress, A., et al. 2005. Bcr is a negative regulator of the Wnt signalling pathway. EMBO Rep. 6: 1095-1100.
5. Kawano, T., et al. 2007. MUC1 oncoprotein regulates Bcr-Abl stability and pathogenesis in chronic myelogenous leukemia cells. Cancer Res. 67: 11576-11584.
6. Yi, S.J., et al. 2009. Transglutaminase 2 regulates the GTPase-activating activity of Bcr. J. Biol. Chem. 284: 35645-35651.
7. Peng, B., et al. 2012. Microarray-assisted pathway analysis identifies MT1X & NFκB as mediators of TCRP1-associated resistance to cisplatin in oral squamous cell carcinoma. PLoS ONE 7: e51413.

RESEARCH USE

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