SANTA CRUZ BIOTECHNOLOGY, INC.

Bcr (A-1): sc-365728

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 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.

CHROMOSOMAL LOCATION

Genetic locus: BCR (human) mapping to 22q11.23, ABL1 (human) mapping to 9q34.12; Bcr (mouse) mapping to 10 B5.3, Abl1 (mouse) mapping to 2 B.

SOURCE

Bcr (A-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 2-29 at the N-terminus of Bcr of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-365728 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Bcr (A-1) is recommended for detection of Bcr and Bcr/Abl fusion proteins 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).

Bcr (A-1) is also recommended for detection of Bcr and Bcr/Abl fusion proteins in additional species, including canine.

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.

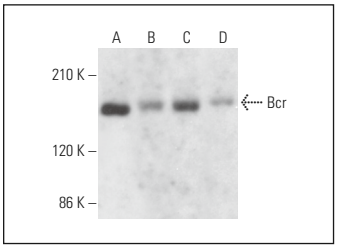
Molecular Weight of Bcr/Abl fusion proteins: 190/210 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, HEK293 whole cell lysate: sc-45136 or Jurkat whole cell lysate: sc-2204.

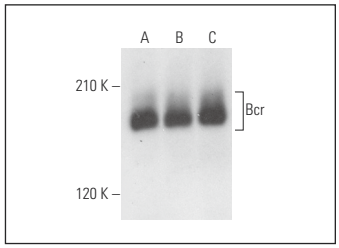
RECOMMENDED SUPPORT REAGENTS

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 (A-1): sc-365728. Western blot analysis of Bcr expression in K-562 (**A**), C2C12 (**B**), SUP-T1 (**C**) and U-87 MG (**D**) whole cell lysates.



Bcr (A-1): sc-365728. Western blot analysis of Bcr expression in HEK293 (**A**), Y79 (**B**) and Jurkat (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Feng, R., et al. 2018. Interaction of Abl tyrosine kinases with SOCS3 impairs its suppressor function in tumorigenesis. Neoplasia 20: 1095-1105.
2. Zhang, Y., et al. 2019. Neferine in the lotus plumule potentiates the anti-tumor effect of imatinib in primary chronic myeloid leukemia cells *in vitro.* J. Food Sci. 84: 904-910.
3. Rocco, S., et al. 2025. Tyrosine kinase inhibitor therapy enhances stem cells profile and may contribute to survival of chronic myeloid leukemi-astem cells. J. Clin. Med. 14: 392.

STORAGE

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

RESEARCH USE

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

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.