

Bcr Antibody

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R Pg	Endogenous	130, 160 (Bcr); 210 (Bcr-Abl)	Rabbit	#P11274	613

Product Usage Information**Application**

Western Blotting

Dilution

1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

Bcr Antibody detects endogenous levels of total Bcr as well as the 210 kDa Bcr-Abl fusion protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to the amino-terminal sequence of human Bcr. Antibodies are purified by protein A and peptide affinity chromatography.

Background

The Bcr gene was originally identified by its presence in the chimeric Bcr-Abl oncogene (1). The amino-terminal region of Bcr contains an oligomerization domain, a serine/threonine kinase domain, and a region that binds SH2 domains. The middle of the protein has a PH domain and a region of sequence similarity to the guanine nucleotide exchange factors for the Rho family of GTP binding proteins. The carboxy-terminal region may be involved in a GTPase activating function for the small GTP-binding protein Rac (2,3). The function of wild type Bcr in cells remains unclear. PDGF receptor may use Bcr as a downstream signaling mediator (4). Research studies have shown that the Bcr-Abl fusion results in production of a constitutively active tyrosine kinase, which causes chronic myelogenous leukemia (CML) (5). Tyr177 of Bcr is phosphorylated in the Bcr-Abl fusion protein, which plays an important role in transforming the activity of Bcr-Abl (6). Phosphorylated Tyr177 provides a docking site for Gab2 and GRB2 (7,8).

Background References

1. Groffen, J. et al. (1984) *Cell* 36, 93-99.
2. Maru, Y. et al. (1991) *Cell* 67, 459-468.
3. Che, W. et al. (2001) *Circulation* 104, 1399-1406.
4. Abe, J. I. et al. (2001) *Ann. N.Y. Acad. Sci.* 947, 341-343.
5. Voncken, J. W. et al. (1995) *Cell* 80, 719-728.
6. He, Y. et al. (2002) *Blood* 99, 2957-2968.
7. Sattler, M. et al. (2002) *Cancer Cell* 1, 479-492.
8. Warmuth, M. et al. (1995) *J. Biol. Chem.* 272, 33260-33270.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Pg:** Pig

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