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#3908

## Bcr-Abl (b2a2 Junction Specific) (L99H4) Mouse mAb

For Research Use Only. Not for Use in Diagnostic Procedures.

<b>Applications:</b> W	<b>Reactivity:</b> H	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 210	<b>Source/Isotype:</b> Mouse IgG2a	<b>UniProt ID:</b> #A9UF07
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### 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, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

### Specificity/Sensitivity

Bcr-Abl (b2a2 Junction Specific) (L99H4) Mouse mAb detects endogenous levels of Bcr-Abl (b2a2) fusion proteins. This antibody does not cross-react with the b3a2 isoform of Bcr-Abl.

### Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to the b2a2 junction site sequence of human Bcr-Abl.

### 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).

The fusion protein encoded by Bcr-Abl varies in size, depending on the breakpoint in the BCR gene. Three breakpoint cluster regions have been characterized to date: major (M-bcr), minor (m-bcr) and micro (mu-bcr). The overwhelming majority of CML patients have a p210 Bcr-Abl gene (M-bcr), whose mRNA transcripts have a b3a2 and/or a b2a2 junction. The smallest of the fusion proteins, p190 Bcr-Abl, (m-bcr breakpoint) is principally associated with Ph-positive ALL. Rare cases of CML are due to a p190-type of Bcr-Abl gene and in these, the disease tends to have a prominent monocytic component, resembling CMML. CML resulting from a p230 Bcr-Abl gene (mu-bcr breakpoint) is also rare, and has been associated with the CNL variant and/or with marked thrombocytosis. Exceptional CML cases have been described with Bcr breakpoints outside the three defined cluster regions, or with unusual breakpoints in Abl (9).

### Background References

- Groffen, J. et al. (1984) *Cell* 36, 93-99.
- Maru, Y. et al. (1991) *Cell* 67, 459-468.
- Che, W. et al. (2001) *Circulation* 104, 1399-1406.
- Abe, J. I. et al. (2001) *Ann. N.Y. Acad. Sci.* 947, 341-343.
- Voncken, J. W. et al. (1995) *Cell* 80, 719-728.
- He, Y. et al. (2002) *Blood* 99, 2957-2968.
- Sattler, M. et al. (2002) *Cancer Cell* 1, 479-492.
- Warmuth, M. et al. (1995) *J. Biol. Chem.* 272, 33260-33270.
- Melo, J.V. (1997) *Baillieres Clin. Haematol* 10, 203-22.

### 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

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