

Technical Data Sheet

Purified Mouse Anti- ABL

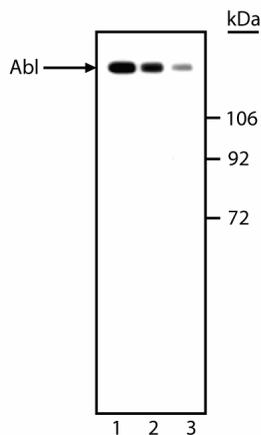
Product Information

Material Number:	554148
Size:	0.1 mg
Concentration:	0.5 mg/ml
Clone:	8E9
Immunogen:	Recombinant Mouse Abl Gag Fusion Protein
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Human Reported: Mouse
Target MW:	145 kDa
Storage Buffer:	Aqueous buffered solution containing $\leq 0.09\%$ sodium azide.

Description

The proto-oncogene c-abl was first isolated from the mouse genome as a gene with similarity to the v-abl oncogene of Abelson murine leukemia virus. The c-abl gene encodes a protein tyrosine kinase that is localized in the cytoplasm and nucleus. The c-abl protein shares several common features with other cytoplasmic tyrosine kinases, including the src-homology domains 2 (SH2) and 3 (SH3). The SH2 domain is believed to bind specifically to tyrosine residues of other proteins. The function of the SH3 domain is still unclear. Unique to the c-abl tyrosine kinase is a large C-terminal segment which seems to be essential for its biological function, since mice homozygous for a C-terminal deletion of c-abl have multiple defects at birth. The C-terminal fragment of c-abl contains a DNA-binding domain, and the DNA-binding affinity of this domain seems to be regulated by phosphorylation of critical serine/threonine residues. The c-abl proto-oncogene can be activated in a variety of ways. For example, in Philadelphia chromosome (Ph1)-positive leukemias the c-abl proto-oncogene on chromosome 9 becomes fused to the bcr gene on chromosome 22, and bcr-abl fusion proteins are produced. Ph1-positive cells express either the atypical 210 kDa bcr-abl fusion protein or a smaller 185 kDa bcr-abl fusion protein. The bcr sequences activate the c-abl tyrosine kinase by deregulating its expression, and actin filament-binding function associated with c-abl is also activated. Expression of bcr-abl fusion proteins in vitro leads to transformation of pre-B lymphoid cells supporting their role as an oncogene. The phosphorylated form of c-abl is observed at ~145 kDa on SDS/PAGE. The 8E9 clone has been reported to react with an epitope in the tyrosine kinase domain of murine abl proteins [Wang *et al.*].

This antibody is routinely tested by western blot analysis. Other applications were tested at BD Biosciences Pharmingen during antibody development only or reported in the literature.



Western blot analysis of Abl. Lysate from A-431 human epidermal carcinoma cells was probed with anti-Abl (clone 8E9, Cat. No. 554148) and titrated between 1 μ g/ml and 0.04 μ g/ml (lanes 1-3). Abl is identified at ~145 kDa.

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography. Store undiluted at 4° C.

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Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development
Immunoprecipitation	Tested During Development

Suggested Companion Products

Catalog Number	Name	Size	Clone
554002	HRP Goat Anti-Mouse Igs	1.0 ml	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharming/en/protocols for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.

References

- Guo JQ, Hirsch-Ginsberg CF, Xian YM, et al. Acute lymphoid leukemia molecular phenotype in a patient with benign-phase chronic myelogenous leukemia. *Hematol Pathol.* 1993; 7(2):91-106.(Clone-specific: Western blot)
- Guo JQ, Lian JY, Xian YM, et al. BCR-ABL protein expression in peripheral blood cells of chronic myelogenous leukemia patients undergoing therapy. *Blood.* 1994; 83(12):3629-3637.(Clone-specific: Western blot)
- Guo JQ, Wang JY, Arlinghaus RB. Detection of BCR-ABL proteins in blood cells of benign phase chronic myelogenous leukemia patients. *Cancer Res.* 1991; 51(11):3048-3051.(Clone-specific: Western blot)
- Kipreos ET, Lee GJ, Wang JY. Isolation of temperature-sensitive tyrosine kinase mutants of v-abl oncogene by screening with antibodies for phosphotyrosine. *Proc Natl Acad Sci U S A.* 1987; 84(5):1345-1349.(Clone-specific: Western blot)
- McWhirter JR, Wang JY. An actin-binding function contributes to transformation by the Bcr-Abl oncoprotein of Philadelphia chromosome-positive human leukemias. *EMBO J.* 1993; 12(4):1533-1546.(Clone-specific: Immunofluorescence)
- McWhirter JR, Wang JY. Activation of tyrosinase kinase and microfilament-binding functions of c-abl by bcr sequences in bcr/abl fusion proteins. *Mol Cell Biol.* 1991; 11(3):1553-1565.(Clone-specific: Immunofluorescence)
- Wang JY. Negative regulation of c-abl tyrosine kinase by its variable N-terminal amino acids. *Oncogene Res.* 1988; 3(3):293-298.(Clone-specific: Immunoprecipitation, Western blot)