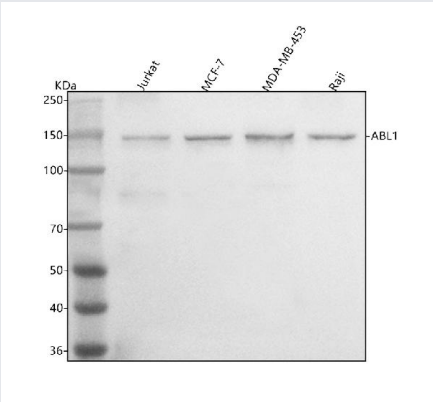
# ABL1 Antibody – Rabbit Polyclonal

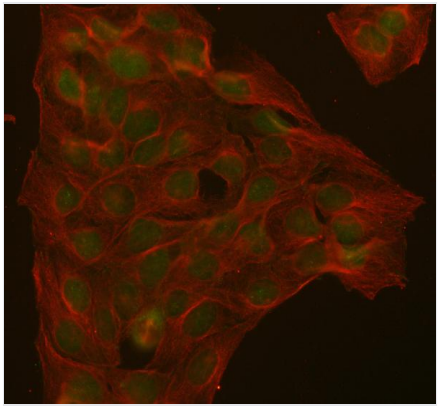
## PRODUCT OVERVIEW

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| **Product Name** | ABL1, Polyclonal Antibody |
| **Full Product Name** | Anti-ABL1 Antibody Picoband |
| **Product Gene Name** | anti-ABL1 antibody |
| **Clonality** | Polyclonal |
| **Host** | Rabbit |
| **Species Reactivity** | Human, Mouse, Rat |
| **Form/Format** | Lyophilized. Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4. |
| **Purity/Purification** | Immunogen affinity purified. |
| **Preparation and Storage** | At -20 degree C for one year from date of receipt. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for six months.Avoid repeated freezing and thawing. |
| **Molecular Weight** | 122,873 Da |
| **Chromosome Location** | Chromosome: 9; NC_000009.11 (133589268..133763062). Location: 9q34.1 |
| **OMIM** | 189980 |
| **3D Structure** | ModBase 3D Structure for P00519 |
| **Immunogen** | E coli-derived human ABL1 recombinant protein (Position: L1012-Q1049). Human ABL1 shares 97.4% amino acid (aa) sequence identity with mouse ABL1. |
| **Reconstitution** | Adding 0.2 ml of distilled water will yield a concentration of 500ug/ml. |
| **Product Categories/Family for anti-ABL1 antibody** | Primary Antibodies |
| **ISO Certification** | Manufactured in an ISO 13485:2003 and EN ISO 13485:2012 Certified Laboratory. |
| **Applications Tested/Suitable for anti-ABL1 antibody** | Western Blot (WB), Immunocytochemistry (ICC), Immunofluorescence (IF), Flow Cytometry (FC/FACS), ELISA (EIA) |
| **Application Notes for anti-ABL1 antibody** | WB: 0.25-0.5ug/ml, Human<br>ICC/IF: 5ug/ml, Human<br>FC/FACS (Fixed): 1-3ug/1x$10^6$ cells, Human, Mouse, Rat<br>ELISA: 0.1-0.5ug/ml |
| **Related Product Information for anti-ABL1 antibody** | The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance. |
| **Product References and Citations for anti-ABL1 antibody** | 1. "Entrez Gene: ABI1 abl-interactor 1".2. Biesova Z, Piccoli C, Wong WT (Feb 1997). "Isolation and characterization of e3B1, an eps8 binding protein that regulates cell growth". Oncogene 14 (2): 233-41.3. Ziemnicka-Kotula D, Xu J, Gu H, Potempska A, Kim KS, Jenkins EC, Trenkner E, Kotula L (Jul 1998). "Identification of a candidate human spectrin Src homology 3 domain-binding protein suggests a general mechanism of association of tyrosine kinases with the spectrin-based membrane skeleton". J Biol Chem 273 (22): 13681-92. |
| **Other Notes** | Small volumes of anti-ABL1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply. |
| **Searchable Terms for ABL1 purchase** | MBS1758034 is an antibody targeting ABL1. Also known as Anti-ABL1 Antibody Picoband. Reactive in Human, Mouse, Rat. Host: Rabbit. |



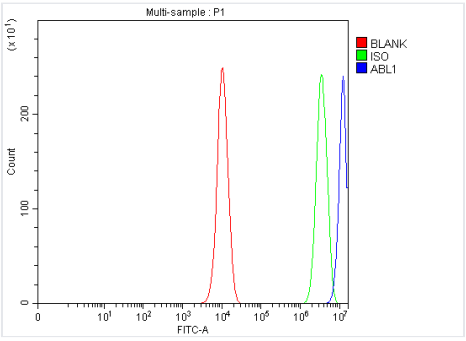

**Western Blot (WB) of anti-ABL1 antibody**

Figure 1. Western blot analysis of ABL1 using anti-ABL1 antibody (MBS1758034).Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel)/90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.Lane 1: human Jurkat whole cell lysates,Lane 2: human MCF-7 whole cell lysates,Lane 3: human MDA-MB-453 whole cell lysates,Lane 4: human Raji whole cell lysates.After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-ABL1 antigen affinity purified polyclonal antibody (#MBS1758034) at 0.5ug/mL overnight at 4 degree C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (#MBS176460) with Tanon 5200 system. A specific band was detected for ABL1 at approximately 143 kDa. The expected band size for ABL1 is at 133 kDa.



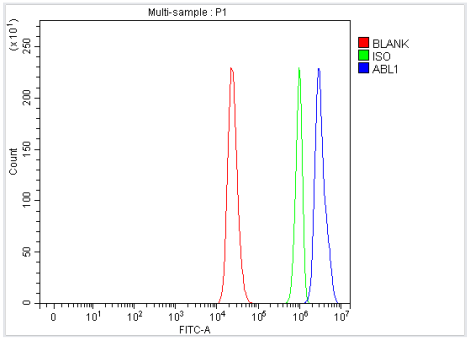
**Immunofluorescence (IF) of anti-ABL1 antibody**

Figure 2. IF analysis of ABL1 using anti-ABL1 antibody (MBS1758034) and anti-Beta Tubulin antibody (M01857-3).ABL1 was detected in immunocytochemical section of U2OS cell. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (#MBS176582) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5ug/mL rabbit anti-ABL1 Antibody (MBS1758034) and mouse anti-Beta Tubulin antibody (M01857-3) overnight at 4 degree C. DyLight488 Conjugated Goat Anti-Rabbit IgG (MBS177405) and DyLight550 Conjugated Goat Anti-Mouse IgG (BA1133) were used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37 degree C. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



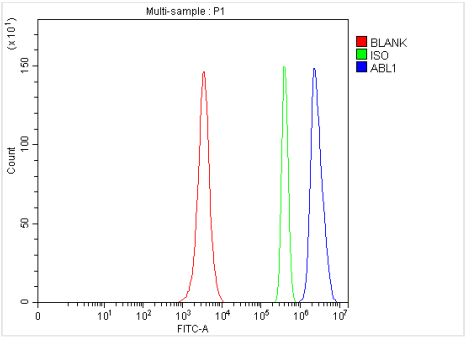

**Flow Cytometry (FC/FACS) of anti-ABL1 antibody**

Figure 3. Flow Cytometry analysis of PC-3 cells using anti-ABL1 antibody (MBS1758034).Overlay histogram showing PC-3 cells stained with MBS1758034 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-ABL1 Antibody (MBS1758034, 1ug/1x106 cells) for 30 min at 20 degree C. DyLight488 conjugated goat anti-rabbit IgG (MBS177405, 5-10ug/1x106 cells) was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x106) used under the same conditions. Unlabelled sample (Red line) was also used as a control.




**Flow Cytometry (FC/FACS) of anti-ABL1 antibody**

Figure 4. Flow Cytometry analysis of PC-12 cells using anti-ABL1 antibody (MBS1758034).Overlay histogram showing PC-12 cells stained with MBS1758034 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-ABL1 Antibody (MBS1758034, 1ug/1x106 cells) for 30 min at 20 degree C. DyLight488 conjugated goat anti-rabbit IgG (MBS177405, 5-10ug/1x106 cells) was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x106) used under the same conditions. Unlabelled sample (Red line) was also used as a control.




**Flow Cytometry (FC/FACS) of anti-ABL1 antibody**
Figure 5. Flow Cytometry analysis of RAW264.7 cells using anti-ABL1 antibody (MBS1758034).Overlay histogram showing RAW264.7 cells stained with MBS1758034 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-ABL1 Antibody (MBS1758034, 1ug/1x106 cells) for 30 min at 20 degree C. DyLight488 conjugated goat anti-rabbit IgG (MBS177405, 5-10ug/1x106 cells) was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x106) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

## ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for ABL1. It may not necessarily be applicable to this product.

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| **NCBI GI #** | 62362414 |
| **NCBI GeneID** | 25 |
| **NCBI Accession #** | NP_005148.2 |
| **UniProt Primary Accession #** | P00519 |
| **UniProt Secondary Accession #** | Q13869; Q13870; Q16133; Q17R61; Q45F09; A3KFJ3 |
| **UniProt Related Accession #** | P00519 |
| **GenBank Nucleotide #** | NM_005157.4 |
| **NCBI Official Full Name** | tyrosine-protein kinase ABL1 isoform a |
| **NCBI Official Synonym Full Names** | c-abl oncogene 1, non-receptor tyrosine kinase |
| **NCBI Official Symbol** | ABL1 |
| **NCBI Official Synonym Symbols** | ABL; JTK7; p150; c-ABL; v-abl; bcr/abl |
| **UniProt Protein Name** | Tyrosine-protein kinase ABL1 |
| **UniProt Synonym Protein Names** | Abelson murine leukemia viral oncogene homolog 1; Abelson tyrosine-protein kinase 1; Proto-oncogene c-Abl; p150 |
| **Protein Family** | Tyrosine-protein kinase |
| **UniProt Gene Name** | ABL1 |
| **UniProt Synonym Gene Names** | ABL; JTK7 |
| **UniProt Entry Name** | ABL1_HUMAN |
| **NCBI Protein Information** | tyrosine-protein kinase ABL1; proto-oncogene c-Abl; bcr/c-abl oncogene protein; Abelson tyrosine-protein kinase 1; c-abl oncogene 1, receptor tyrosine kinase; proto-oncogene tyrosine-protein kinase ABL1; v-abl Abelson murine leukemia viral oncogene homolo |

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| **NCBI Summary for ABL1** | The ABL1 protooncogene encodes a cytoplasmic and nuclear protein tyrosine kinase that has been implicated in processes of cell differentiation, cell division, cell adhesion, and stress response. Activity of c-Abl protein is negatively regulated by its SH3 domain, and deletion of the SH3 domain turns ABL1 into an oncogene. The t(9;22) translocation results in the head-to-tail fusion of the BCR (MIM:151410) and ABL1 genes present in many cases of chronic myelogeneous leukemia. The DNA-binding activity of the ubiquitously expressed ABL1 tyrosine kinase is regulated by CDC2-mediated phosphorylation, suggesting a cell cycle function for ABL1. The ABL1 gene is expressed as either a 6- or 7-kb mRNA transcript, with alternatively spliced first exons spliced to the common exons 2-11. [provided by RefSeq, Jul 2008] |
| **UniProt Comments for ABL1** | Abl: an ubiquitously expressed and highly conserved proto-oncogenic tyrosine kinase. c-Abl protein is distributed in both the nucleus and the cytoplasm of cells. Negatively regulated by its SH3 domain, and deletion of the SH3 domain turns ABL1 into an oncogene. It has been implicated in regulation of cell proliferation, differentiation, apoptosis, cell adhesion and stress response. The Philadephia chromosome translocation t(9;22)(q34;q11) creates a Bcr-Abl fusion protein, responsible for 90% of chronic myelogenous leukemia (CML) and ~25% of acute lymphoblastic leukemia (ALL). Inhibitors: Gleevec (imatinib, Glivec), Dasatinib. Two alternatively-spliced isoforms have been described.<br><br>Protein type: Protein kinase, tyrosine (non-receptor); Protein kinase, TK; Kinase, protein; Oncoprotein; EC 2.7.10.2; TK group; Abl family<br><br>Chromosomal Location of Human Ortholog: 9q34.1<br><br>Cellular Component: nucleoplasm; nuclear membrane; extrinsic to internal side of plasma membrane; mitochondrion; perinuclear region of cytoplasm; cytoplasm; leading edge; nucleolus; nucleus; cytosol; actin cytoskeleton<br><br>Molecular Function: protein C-terminus binding; actin monomer binding; magnesium ion binding; non-membrane spanning protein tyrosine kinase activity; protein kinase activity; actin filament binding; protein binding; DNA binding; syntaxin binding; protein-tyrosine kinase activity; manganese ion binding; mitogen-activated protein kinase binding; nicotinate-nucleotide adenylyltransferase activity; SH3 domain binding; ATP binding; receptor binding<br><br>Biological Process: DNA damage induced protein phosphorylation; positive regulation of apoptosis; cerebellum morphogenesis; negative regulation of BMP signaling pathway; elevation of cytosolic calcium ion concentration; transitional one stage B cell differentiation; B cell receptor signaling pathway; regulation of endocytosis; negative regulation of mitotic cell cycle; cell cycle arrest; neuromuscular process controlling balance; positive regulation of oxidoreductase activity; spleen development; mitosis; positive regulation of I-kappaB kinase/NF-kappaB cascade; negative regulation of I-kappaB kinase/NF-kappaB cascade; positive regulation of peptidyl-tyrosine phosphorylation; muscle cell differentiation; DNA damage response, signal transduction resulting in induction of apoptosis; positive regulation of osteoblast proliferation; negative regulation of ubiquitin-protein ligase activity; autophagy; response to oxidative stress; actin cytoskeleton organization and biogenesis; axon guidance; peptidyl-tyrosine phosphorylation; alpha-beta T cell differentiation; platelet-derived growth factor receptor signaling pathway; mitochondrial depolarization; positive regulation of mitotic cell cycle; Bergmann glial cell differentiation; regulation of transcription, DNA-dependent; collateral sprouting; cell differentiation; B cell proliferation during immune response; epidermal growth factor receptor signaling pathway; regulation of cell adhesion; cell migration; mismatch repair; thymus development; DNA damage response, signal transduction; B-1 B cell homeostasis; activated T cell proliferation; protein modification process; regulation of cell proliferation; microspike biogenesis; innate immune response; positive regulation of muscle cell differentiation; regulation of autophagy; positive regulation of release of sequestered calcium ion into cytosol; negative regulation of cell-cell adhesion; blood coagulation; response to DNA damage stimulus<br><br>Disease: Leukemia, Chronic Myeloid |
| **Research Articles on ABL1** | **1.** we concluded that BCR-ABL splice variants, exon 7 deletion is a common splice variant not associating with imatinib resistance. |
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