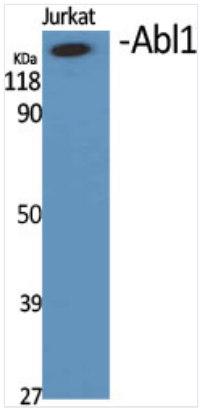
ABL1 Antibody – Rabbit Polyclonal

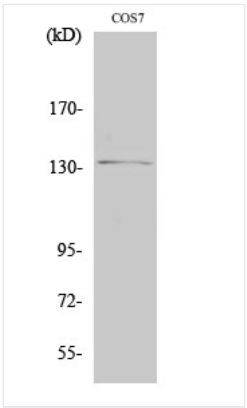
PRODUCT OVERVIEW

Product Name	Abl1, Polyclonal Antibody
Full Product Name	Abl1 Polyclonal Antibody
Product Gene Name	anti-Abl1 antibody
Product Synonym Names	ABL1; ABL; JTK7; Tyrosine-protein kinase ABL1; Abelson murine leukemia viral oncogene homolog 1; Abelson tyrosine-protein kinase 1; Proto-oncogene c-Abl; p150
Clonality	Polyclonal
Host	Rabbit
Species Reactivity	Human, Mouse, Rat, Monkey
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 2 weeks. For long term storage store at -20 degree C in small aliquots to prevent freeze-thaw cycles.
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
Applications Tested/Suitable for anti-Abl1 antibody	Western Blot (WB), Immunohistochemistry-Paraffin (IHC-P)

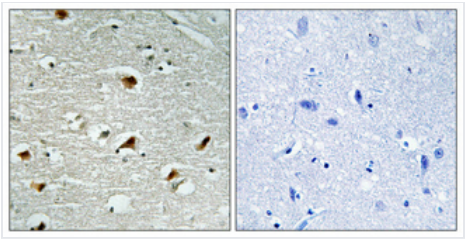
Related Product Information for anti-Abl1 antibody	Non-receptor tyrosine-protein kinase that plays a role in many key processes linked to cell growth and survival such as cytoskeleton remodeling in response to extracellular stimuli, cell motility and adhesion, receptor endocytosis, autophagy, DNA damage response and apoptosis. Coordinates actin remodeling through tyrosine phosphorylation of proteins controlling cytoskeleton dynamics like WASF3 (involved in branch formation); ANXA1 (involved in membrane anchoring); DBN1, DBNL, CTTN, RAPH1 and ENAH (involved in signaling); or MAPT and PXN (microtubule-binding proteins). Phosphorylation of WASF3 is critical for the stimulation of lamellipodia formation and cell migration. Involved in the regulation of cell adhesion and motility through phosphorylation of key regulators of these processes such as BCAR1, CRK, CRKL, DOK1, EFS or NEDD9. Phosphorylates multiple receptor tyrosine kinases and more particularly promotes endocytosis of EGFR, facilitates the formation of neuromuscular synapses through MUSK, inhibits PDGFRB-mediated chemotaxis and modulates the endocytosis of activated B-cell receptor complexes. Other substrates which are involved in endocytosis regulation are the caveolin (CAV1) and RIN1. Moreover, ABL1 regulates the CBL family of ubiquitin ligases that drive receptor down-regulation and actin remodeling. Phosphorylation of CBL leads to increased EGFR stability. Involved in late-stage autophagy by regulating positively the trafficking and function of lysosomal components. ABL1 targets to mitochondria in response to oxidative stress and thereby mediates mitochondrial dysfunction and cell death. In response to oxidative stress, phosphorylates serine/threonine kinase PRKD2 at 'Tyr-717' (PubMed:28428613). ABL1 is also translocated in the nucleus where it has DNA-binding activity and is involved in DNA-damage response and apoptosis. Many substrates are known mediators of DNA repair: DDB1, DDB2, ERCC3, ERCC6, RAD9A, RAD51, RAD52 or WRN. Activates the proapoptotic pathway when the DNA damage is too severe to be repaired. Phosphorylates TP73, a primary regulator for this type of damage-induced apoptosis. Phosphorylates the caspase CASP9 on 'Tyr-153' and regulates its processing in the apoptotic response to DNA damage. Phosphorylates PSMA7 that leads to an inhibition of proteasomal activity and cell cycle transition blocks. ABL1 acts also as a regulator of multiple pathological signaling cascades during infection. Several known tyrosine-phosphorylated microbial proteins have been identified as ABL1 substrates. This is the case of A36R of Vaccinia virus, Tir (translocated intimin receptor) of pathogenic E.coli and possibly Citrobacter, CagA (cytotoxin- associated gene A) of H.pylori, or AnkA (ankyrin repeat-containing protein A) of A.phagocytophilum. Pathogens can highjack ABL1 kinase signaling to reorganize the host actin cytoskeleton for multiple purposes, like facilitating intracellular movement and host cell exit. Finally, functions as its own regulator through autocatalytic activity as well as through phosphorylation of its inhibitor, ABI1. Regulates T-cell differentiation in a TBX21- dependent manner. Phosphorylates TBX21 on tyrosine residues leading to an enhancement of its transcriptional activator activity (By similarity).
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	MBS9242886 is an antibody targeting Abl1. Also known as Abl1 Polyclonal Antibody. Reactive in Human, Mouse, Rat, Monkey. Host: Rabbit.



Wester Blot (WB) of anti-Abl1 antibody
Dilution: Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. ELISA: 1/5000. Not yet tested in other applications.



Western Blot (WB) of anti-Abl1 antibody
Dilution: Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. ELISA: 1/5000. Not yet tested in other applications.



Immunohistochemistry (IHC)-Paraffin of anti-Abl1 antibody
Dilution: Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. ELISA: 1/5000.
Not yet tested in other applications.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for Abl1. It may not necessarily be applicable to this product.

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
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. Protein type: Protein kinase, tyrosine (non-receptor); Protein kinase, TK; Kinase, protein; Oncoprotein; EC 2.7.10.2; TK group; Abl family Chromosomal Location of Human Ortholog: 9q34.1 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 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 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 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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