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Mouse Abl1 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP13907c

Product Information

Application	WB, IHC-P, E
Primary Accession	P00520
Other Accession	NP_033724.2, NP_001106174.1
Reactivity	Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB34442
Calculated MW	122673
Antigen Region	613-641

Additional Information

Gene ID	11350
Other Names	Tyrosine-protein kinase ABL1, Abelson murine leukemia viral oncogene homolog 1, Abelson tyrosine-protein kinase 1, Proto-oncogene c-Abl, p150, Abl1, Abl
Target/Specificity	This Mouse Abl1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 613-641 amino acids from the Central region of mouse Abl1.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Mouse Abl1 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	Abl1
Synonyms	Abl

Function	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' (By similarity). 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-191' 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. Regulates T-cell differentiation in a TBX21-dependent manner (PubMed:21690296). Positively regulates chemokine-mediated T-cell migration, polarization, and homing to lymph nodes and immune-challenged tissues, potentially via activation of NEDD9/HEF1 and RAP1 (PubMed:22810897). Phosphorylates TBX21 on tyrosine residues leading to an enhancement of its transcriptional activator activity (PubMed:21690296).
Cellular Location	Cytoplasm, cytoskeleton. Nucleus. Mitochondrion. Note=The myristoylated c-ABL protein is reported to be nuclear Sequestered into the cytoplasm through interaction with 14-3-3 proteins (By similarity). Localizes to mitochondria in response to oxidative stress.
Tissue Location	Widely expressed.

Background

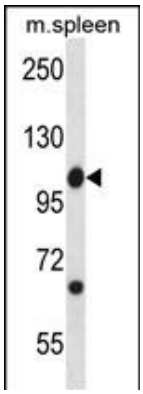
Protein kinase that regulates key processes linked to cell growth and survival. Regulates cytoskeleton remodeling during cell differentiation, cell division and cell adhesion. Localizes to dynamic actin structures, and phosphorylates CRK and CRKL, DOK1, and other proteins controlling cytoskeleton dynamics. Regulates DNA repair potentially by activating the proapoptotic pathway when the DNA damage is too severe to be repaired. Phosphorylates PSMA7 that leads to an inhibition of proteasomal activity and cell cycle transition blocks.

References

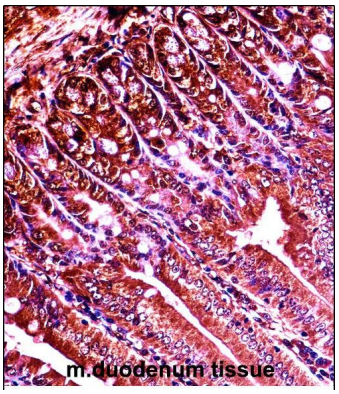
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Images



Mouse Abl1 Antibody (Center) (Cat. #AP13907c) western blot analysis in mouse spleen tissue lysates (35ug/lane).This demonstrates the Abl1 antibody detected the Abl1 protein (arrow).



Mouse Abl1 Antibody (Center) (AP13907c)immunohistochemistry analysis in formalin fixed and paraffin embedded mouse duodenum tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of Mouse Abl1 Antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.

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