

ABL2 Antibody

Purified Mouse Monoclonal Antibody (Mab) Catalog # AM8460b

Product Information

Application WB, IHC-P, E **Primary Accession** P42684

Reactivity Human, Mouse

HostMouseClonalitymonoclonalIsotypeIgG1,k

Clone Names 1442CT175.30.33

Calculated MW 128343

Additional Information

Gene ID 27

Other Names Abelson tyrosine-protein kinase 2, Abelson murine leukemia viral oncogene

homolog 2, Abelson-related gene protein, Tyrosine-protein kinase ARG, ABL2,

ABLL, ARG

Target/Specificity This ABL2 antibody is generated from a mouse immunized with a

recombinant protein.

Dilution WB~~1:2000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.

Format Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide.

This antibody is purified through a protein G column, followed by dialysis

against PBS.

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 ABL2 Antibody is for research use only and not for use in diagnostic or

therapeutic procedures.

Protein Information

Name ABL2

Synonyms ABLL, ARG

Function Non-receptor tyrosine-protein kinase that plays an ABL1- overlapping role in

key processes linked to cell growth and survival such as cytoskeleton

remodeling in response to extracellular stimuli, cell motility and adhesion and

receptor endocytosis. Coordinates actin remodeling through tyrosine phosphorylation of proteins controlling cytoskeleton dynamics like MYH10 (involved in movement); CTTN (involved in signaling); or TUBA1 and TUBB (microtubule subunits). Binds directly F-actin and regulates actin cytoskeletal structure through its F-actin- bundling activity. Involved in the regulation of cell adhesion and motility through phosphorylation of key regulators of these processes such as CRK, CRKL, DOK1 or ARHGAP35. Adhesion-dependent phosphorylation of ARHGAP35 promotes its association with RASA1, resulting in recruitment of ARHGAP35 to the cell periphery where it inhibits RHO. Phosphorylates multiple receptor tyrosine kinases like PDGFRB and other substrates which are involved in endocytosis regulation such as RIN1. In brain, may regulate neurotransmission by phosphorylating proteins at the synapse. ABL2 also acts as a regulator of multiple pathological signaling cascades during infection. Pathogens can highjack ABL2 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. 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 (By similarity).

Cytoplasm, cytoskeleton {ECO:0000250 | UniProtKB:Q4JIM5}

Tissue Location Widely expressed.

Background

Non-receptor tyrosine-protein kinase that plays an ABL1- overlapping role in key processes linked to cell growth and survival such as cytoskeleton remodeling in response to extracellular stimuli, cell motility and adhesion and receptor endocytosis. Coordinates actin remodeling through tyrosine phosphorylation of proteins controlling cytoskeleton dynamics like MYH10 (involved in movement); CTTN (involved in signaling); or TUBA1 and TUBB (microtubule subunits). Binds directly F-actin and regulates actin cytoskeletal structure through its F-actin- bundling activity. Involved in the regulation of cell adhesion and motility through phosphorylation of key regulators of these processes such as CRK, CRKL, DOK1 or ARHGAP35.

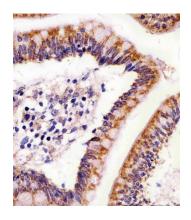
Adhesion-dependent phosphorylation of ARHGAP35 promotes its association with RASA1, resulting in recruitment of ARHGAP35 to the cell periphery where it inhibits RHO. Phosphorylates multiple receptor tyrosine kinases like PDGFRB and other substrates which are involved in endocytosis regulation such as RIN1. In brain, may regulate neurotransmission by phosphorylating proteins at the synapse. ABL2 acts also as a regulator of multiple pathological signaling cascades during infection. Pathogens can highjack ABL2 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.

References

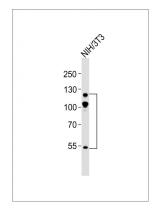
Kruh G.D.,et al.Proc. Natl. Acad. Sci. U.S.A. 87:5802-5806(1990). Bianchi C.,et al.J. Cell. Biochem. 105:1219-1227(2008). Ota T.,et al.Nat. Genet. 36:40-45(2004). Bechtel S.,et al.BMC Genomics 8:399-399(2007). Gregory S.G.,et al.Nature 441:315-321(2006).

Images

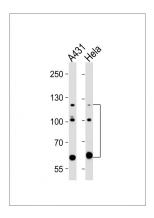
AM8460b staining ABL2 in human colon tissue sections by Immunohistochemistry (IHC-P -



paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3% BSA for 0. 5 hour at room temperature; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody (1/25) for 1 hours at 37°C. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.



Anti-ABL2 Antibody at 1:500 dilution + NIH/3T3 whole cell lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size : 128 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



All lanes: Anti-ABL2 Antibody at 1:2000 dilution Lane 1: A431 whole cell lysates Lane 2: Hela whole cell lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size: 128 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.