abcam

ab134134

Anti-ABL1 + ABL2 antibody [EPR1222(2)]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR1222(2)
Purification technique	Affinity purification Protein A
Dissociation constant	2.36×10^{-11} M
Concentration	0.438 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

IP

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000 - 1/10000
Notes	-

Species	Mouse
Dilution info	1/1000 - 1/10000
Notes	-

Species	Rat
Dilution info	1/1000 - 1/10000
Notes	-

IHC-P

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/10 - 1/100

Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Expected

Species	Mouse
Dilution info	1/10 - 1/100
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Species	Rat
Dilution info	1/10 - 1/100
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Target data

See full target information ABL2

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).

Storage

Shipped at conditions	Conditional Ambient

Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Storage information	Stable for 12 months at -20°C

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	ABL1 and ABL2 also known as c-Abl and Arg are non-receptor tyrosine kinases that play significant roles in cellular processes. These proteins have molecular masses of approximately 120 and 140 kilodaltons respectively. ABL1 and ABL2 share structural similarities with other kinases but have unique regions that allow them to participate in specific cellular tasks. They are widely expressed in various tissues including hematopoietic cells indicating their involvement in diverse physiological functions.
Biological function summary	ABL1 and ABL2 contribute to essential cellular processes such as cell differentiation cell division adhesion and stress response. These kinases do not typically form complexes but they can interact with other proteins to fulfill their roles. They modulate cytoskeletal dynamics impacting cellular architecture and motility and are important in regulating responses to DNA damage. Their activity depends on phosphorylation events which can both activate and inhibit their functions.
Pathways	ABL1 and ABL2 participate in the regulation of the MAPK and p53 pathways. They influence cellular responses to growth factors and stress. In the MAPK pathway ABL1 and ABL2 interact with proteins like Grb2 and SOS mediating signal transduction that impacts cellular proliferation. Their roles in the p53 pathway

	involve modulating apoptosis and cell cycle arrest important for maintaining genome integrity.
Associated diseases and disorders	ABL1 is strongly associated with chronic myeloid leukemia (CML) particularly through its fusion with the BCR gene to form the BCR-ABL oncogene. This oncogene results in unregulated tyrosine kinase activity that leads to excessive cellular proliferation. ABL2 has connections to solid tumors and neuropathies though its role is less defined than ABL1. Both kinases emerge as potential targets for therapeutic interventions in cancers and disorders related to dysregulated kinase activity.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

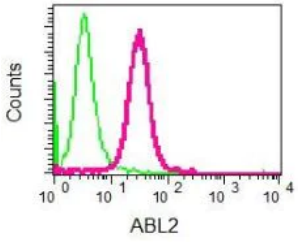
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

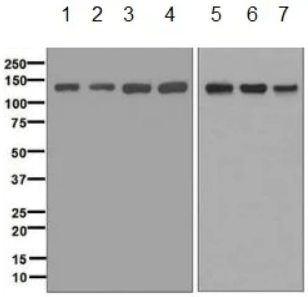
3 product images



Flow Cytometry (Intracellular) - Anti-ABL1 + ABL2 antibody [EPR1222(2)] (ab134134)

ABL1 + ABL2 Flow Cytometry (Intracellular) staining using rabbit Anti-ABL1 + ABL2 antibody

Intracellular flow cytometric analysis of permeabilized Jurkat cells labelling ABL2 (red) using ab134134 at 1/10 dilution or using a Rabbit IgG negative control (green)



Western blot - Anti-ABL1 + ABL2 antibody [EPR1222(2)] (ab134134)

All lanes:
Western blot - Anti-ABL1 + ABL2 antibody [EPR1222(2)] (ab134134) at 1/1000 dilution

Lane 1:
Jurkat (Human T cell leukemia cell line from peripheral blood) whole cell lysate at 10 µg

Lane 2:
HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate at 10 µg

Lane 3:
K-562 (Human chronic myelogenous leukemia lymphoblast cell line) whole cell lysate at 10 µg

Lane 4:
MOLT-4 (Human lymphoblastic leukemia cell line) whole cell lysate at 10 µg

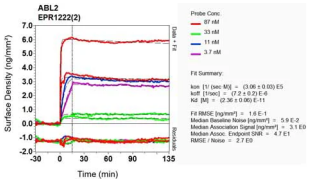
Lane 5:
RAW 264.7 (Mouse macrophage cell line transformed with Abelson murine leukemia virus) whole cell lysate at 10 µg

Lane 6:
PC-12 (Rat adrenal gland pheochromocytoma cell line) whole cell lysate at 10 µg

Lane 7:
NIH/3T3 (Mouse embryonic fibroblast cell line) whole cell lysate at 10 µg

Secondary

All lanes:
HRP labelled goat anti rabbit at 1/2000 dilution



OI-RD Scanning - Anti-ABL1 + ABL2 antibody [EPR1222(2)] (ab134134)

We have systematically measured KD (the equilibrium dissociation constant between the antibody and its antigen), of more than 840 recombinant antibodies to assess not only their individual KD values but also to see the average affinity of antibody. Based on the comparison with published literature values for mouse monoclonal antibodies, Recombinant antibodies appear to be on average 1-2 order of magnitude higher affinity.

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