abcam

ab134103

Anti-CD79b antibody [EPR6860]

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	EPR6860
Purification technique	Affinity purification Protein A
Dissociation constant	3.9×10^{-9} M
Concentration	0.131 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

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.

WB

Tested

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

IHC-P

Not recommended

Species	Human
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/250 - 1/500
Notes	-

IP

Not recommended

Species	Human
Dilution info	-
Notes	-

Target data

See full target information CD79B

Function	Required in cooperation with CD79A for initiation of the signal transduction cascade activated by the B-cell antigen receptor complex (BCR) which leads to internalization of the complex, trafficking to late endosomes and antigen presentation. Enhances phosphorylation of CD79A, possibly by recruiting kinases which phosphorylate CD79A or by recruiting proteins which bind to CD79A and protect it from dephosphorylation.

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

Species reactivity
Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

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	CD79b also known as Ig-beta is a protein that plays a mechanical role as part of the B-cell antigen receptor complex. This protein with a mass of approximately 40 kDa is mainly expressed on the surface of B lymphocytes. It is an important component of the heterodimeric complex composed of CD79a (Ig-alpha) and CD79b which associates with membrane-bound immunoglobulins to form the B-

	cell receptor (BCR). CD79b is essential for transducing activation signals following antigen binding to the BCR.
Biological function summary	The primary role of CD79b within the immune system is to support signal transduction. Upon binding of an antigen to BCR on B cells CD79b as part of the BCR complex initiates signaling cascades which lead to B-cell activation proliferation and differentiation. These processes are critical for humoral immunity ensuring adequate antibody production. CD79b is often found in association with CD19 another important B-cell surface protein and together they aid in amplifying the signals required for B-cell response.
Pathways	CD79b is deeply involved in the B-cell receptor signaling pathway and the broader adaptive immune response. Once the BCR is engaged by an antigen CD79b helps activate intracellular signaling pathways that involve kinases such as SYK and BLNK which help propagate and amplify the immune response. These pathways also interact with other receptor components like CD22 and CD19 creating a network of interactions ensuring effective pathogen recognition and response.
Associated diseases and disorders	CD79b carries significant relevance in the context of B-cell malignancies such as chronic lymphocytic leukemia (CLL) and some types of lymphoma. Dysregulation or mutations in CD79b can affect BCR signaling leading to unchecked B-cell proliferation characteristic of these diseases. Additionally CD79b's interaction with proteins such as SYK in the signaling pathways makes it a potential therapeutic target in treating B-cell related cancers. Researchers are actively investigating anti-CD79b therapies to disrupt abnormal signaling in B-cell malignancies.

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

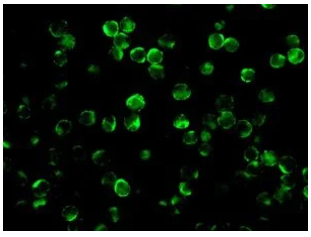
We do not recommend this combination. It is not covered by our product promise.

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.

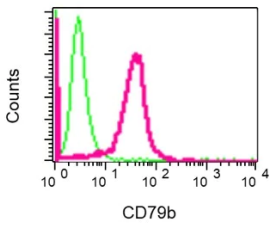
6 product images



Immunocytochemistry/ Immunofluorescence - Anti-CD79b antibody [EPR6860] (ab134103)

CD79b Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-CD79b antibody

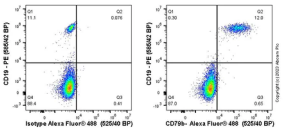
Immunofluorescence analysis of CD79b in Ramos cells, using ab134103 antibody at a dilution of 1/250.



Flow Cytometry - Anti-CD79b antibody [EPR6860] (ab134103)

CD79b Flow Cytometry staining using rabbit Anti-CD79b antibody

Flow Cytometry analysis of Raji cells labeling CD79b with ab134103 at 1/20 dilution (red). A rabbit IgG was used as negative control (green).



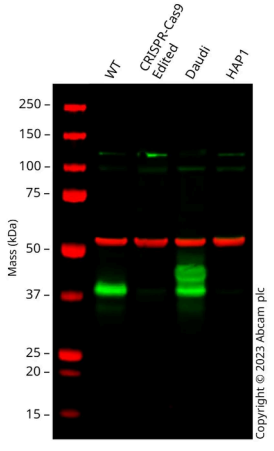
Flow Cytometry - Anti-CD79b antibody [EPR6860] (ab134103)

CD79b Flow Cytometry staining using rabbit Anti-CD79b antibody

Flow cytometry staining of human peripheral blood mononuclear cells (PBMCs) with ab134103 (right) or Recombinant Rabbit IgG, monoclonal [EPR25A] - Isotype Control (left). PBMCs were incubated for 30 min on ice in 1x PBS containing 10 µg/ml human IgG and 10 % normal goat serum to block FC receptors and non-specific protein-protein interaction followed by the antibody ab134103 or Recombinant Rabbit IgG, monoclonal [EPR25A] - Isotype Control (1x 106 in 100 µl at 1.0 µg/ml (1/2300)) for 30min on ice. The cells were simultaneously stained with CD19.

The secondary antibody Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed was incubated at 1/4000 for 30min on ice

Acquisition of >30000 events were collected using a 50 mW Blue laser (488nm) and 525/40 bandpass filter. Events were gated on viable cells.



Western blot - Anti-CD79b antibody [EPR6860] (ab134103)

CD79b Western blot staining using rabbit Anti-CD79b antibody

False colour image of Western blot: Anti-CD79b antibody [EPR6860] staining at 1/1000 dilution, shown in green; Mouse anti-Alpha Tubulin [DM1A] (ab7291) loading control staining at 1/20000 dilution, shown in red. In Western blot, ab134103 was shown to bind specifically to CD79b. A band was observed at 39 kDa in wild-type Raji cell lysates with no signal observed at this size in CD79B CRISPR-Cas9 edited cell line ab273839 (CRISPR-Cas9 edited cell lysate ab273793). The band observed in the CRISPR-Cas9 edited lysate lane below 39 kDa is likely to represent a truncated form of CD79b. This has not been investigated further and the functional properties of the gene product have not been determined. To generate this image, wild-type and CD79B CRISPR-Cas9 edited Raji cell lysates were analysed. First, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 3 % milk in TBS-0.1 % Tween® 20

(TBS-T) before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Rabbit IgG H&L 800CW and Goat anti-Mouse IgG H&L 680RD at 1/20000 dilution.
All lanes:
Western blot - Anti-CD79b antibody [EPR6860] (ab134103) at 1/1000 dilution

Lane 1:
Wild-type Raji cell lysate at 20 µg

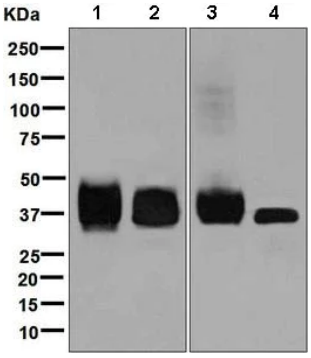
Lane 2:
CD79B CRISPR-Cas9 edited Raji cell lysate at 20 µg

Lane 3:
Daudi cell lysate at 20 µg

Lane 4:
HAP1 cell lysate at 20 µg

Performed under reducing conditions.

Observed band size: 39 kDa



Western blot - Anti-CD79b antibody [EPR6860] (ab134103)

All lanes:
Western blot - Anti-CD79b antibody [EPR6860] (ab134103) at 1/1000 dilution

Lane 1:
Daudi cell lysate at 10 µg

Lane 2:
Namalwa cell lysate at 10 µg

Lane 3:
Ramos cell lysate at 10 µg

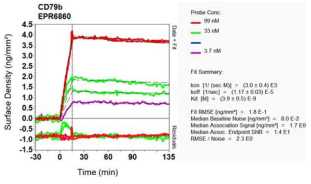
Lane 4:
Raji cell lysate at 10 µg

Secondary

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

Predicted band size: 26 kDa

Observed band size: 35-40 kDa



OI-RD Scanning - Anti-CD79b antibody [EPR6860] (ab134103)

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'.