abcam

ab321802

Anti-CD79a antibody [EPR29061-505] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR29061-505
Purification technique	Affinity purification Protein A
Concentration	0.999 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Mouse
Dilution info	-

Notes	-

Not recommended

Species	Human
Dilution info	-
Notes	-

Flow Cyt

Tested

Species	Mouse
Dilution info	-
Notes	-

Not recommended

Species	Human
Dilution info	-
Notes	-

Target data

See full target information Cd79a

Function Required in cooperation with CD79B for initiation of the signal transduction cascade activated by binding of antigen to the B-cell antigen receptor complex (BCR) which leads to internalization of the complex, trafficking to late endosomes and antigen presentation. Also required for BCR surface expression and for efficient differentiation of pro- and pre-B-cells. Stimulates SYK autophosphorylation and activation. Binds to BLNK, bringing BLNK into proximity with SYK and allowing SYK to phosphorylate BLNK. Also interacts with and increases activity of some Src-family tyrosine kinases. Represses BCR signaling during development of immature B-cells.

Storage

Shipped at conditions Blue Ice

Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C

Notes

ab321802 is the carrier-free version of ab321801.

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.

Conjugation ready
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

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

Activity summary	CD79a also known as Ig-alpha or MB-1 is a component of the B cell antigen receptor (BCR) complex. It is a transmembrane protein with a molecular mass of approximately 47 kDa. CD79a is part of a heterodimer with CD79b and is mainly expressed on the surface of B lymphocytes. This protein plays a critical mechanical role in signaling transduction through the BCR by associating with membrane-bound immunoglobulin molecules helping to initiate the immune response upon antigen binding.
Biological function summary	This protein acts as an essential mediator in the immune system. CD79a together with CD79b forms part of the BCR complex critical for B cell development and

	maturation. The BCR complex activates signaling cascades that influence B cell fate decisions such as proliferation differentiation and apoptosis. By transmitting signals from the BCR CD79a helps regulate these cellular functions necessary for efficient immune defense.
Pathways	CD79a plays a pivotal role in the B cell receptor signaling pathway. This pathway involves signaling molecules such as spleen tyrosine kinase (SYK) and phosphoinositide 3-kinase (PI3K) which are activated upon BCR engagement. CD79a acts in concert with other proteins including CD79b and the IgM receptor facilitating downstream signaling cascades that ensure proper B cell responses. Its role is important for linking extracellular antigen recognition to intracellular signaling events.
Associated diseases and disorders	CD79a is significant in conditions like B cell lymphomas and certain immunodeficiencies. Abnormal expression or mutations in CD79a are associated with some types of non-Hodgkin lymphoma. The protein's interaction with CD79b is particularly relevant as alterations in these proteins' function or expression can impact B cell development and lead to pathogenesis in lymphoproliferative disorders. Consequently CD79a serves as an important biomarker and potential therapeutic target in these diseases.

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

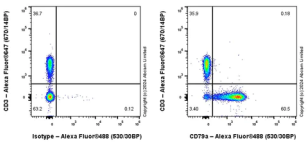
We do not recommend this combination. It is not covered by our product promise.

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.

5 product images



Flow Cytometry - Anti-CD79a antibody [EPR29061-505] - BSA and Azide free (ab321802)

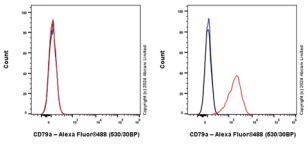
CD79a Flow Cytometry staining of Mouse PBMC using rabbit Anti-CD79a antibody

This data was developed using ab321801, the same antibody clone in a different buffer formulation.

Flow cytometric analysis of mouse PBMC cells labelling CD79a with ab321801 at 1/100 dilution (1ug) / Right compared with a Rabbit monoclonal IgG (ab172730) / Left isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody).

Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.

mouse PBMC are co-stained with CD3 conjugated Alexa Fluor®647.
Gated on viable cell.



Flow Cytometry - Anti-CD79a antibody [EPR29061-505] - BSA and Azide free (ab321802)

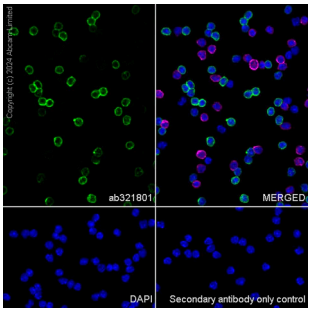
CD79a Flow Cytometry staining using rabbit Anti-CD79a antibody

This data was developed using ab321801, the same antibody clone in a different buffer formulation.

Flow cytometric analysis of EL4 cells (mouse lymphoma T lymphocyte, Left) / WEHI-231 cells (mouse B cell lymphoma B lymphocyte, Right). Labelling CD79a with ab321801 at 1/100 dilution (1 µg) (Red), compared with a Rabbit monoclonal IgG (ab172730) isotype control (black) or unlabelled control (cells without incubation with primary antibody and secondary antibody) (blue).

Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.

Negative control: EL4
Gated on viable cell.



Immunocytochemistry/ Immunofluorescence - Anti-CD79a antibody [EPR29061-505] - BSA and Azide free (ab321802)

CD79a Immunocytochemistry/ Immunofluorescence staining of CD3 negative mouse PBMC (Mouse primary peripheral blood mononuclear cell) using rabbit Anti-CD79a antibody

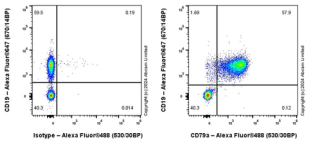
This data was developed using ab321801, the same antibody clone in a different buffer formulation.

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized Mouse PBMC (Mouse primary peripheral blood mononuclear cell) cells labelling CD79a with ab321801 at 1/500 (1.0 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/ab150081 1000 2ug/ml dilution (Green).

Confocal image showing cytoplasmic and membranous staining in subsets of CD3 negative mouse PBMC. (shown in green). The counterstain was observed in magenta. Nuclear DNA was labelled with DAPI (shown in blue).
Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

Anti-mouse CD3 rat monoclonal antibody (Alexa Fluor® 647) was used to counterstain tubulin at 1/100 5ug/ml dilution (Magenta). The Nuclear counterstain was DAPI (Blue).

Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/ab150081 1000 2ug/ml dilution.



Flow Cytometry - Anti-CD79a antibody [EPR29061-505] - BSA and Azide free (ab321802)

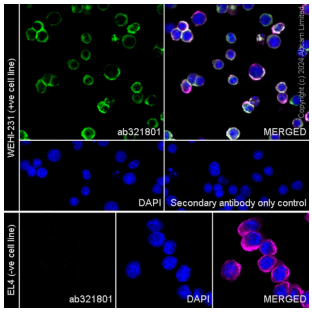
CD79a Flow Cytometry staining of Mouse PBMC using rabbit Anti-CD79a antibody

This data was developed using ab321801, the same antibody clone in a different buffer formulation.

Flow cytometric analysis of mouse PBMC cells labelling CD79a with ab321801 at 1/100 dilution (1ug) / Right compared with a Rabbit monoclonal IgG (ab172730) / Left isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody).

Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.

mouse PBMC are co-stained with CD19 conjugated Alexa Fluor®647.
Gated on viable cell.



Immunocytochemistry/ Immunofluorescence - Anti-CD79a antibody [EPR29061-505] - BSA and Azide free (ab321802)

CD79a Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-CD79a antibody

This data was developed using ab321801, the same antibody clone in a different buffer formulation.

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized WEHI-231 (mouse B cell lymphoma B lymphocyte) cells labelling CD79a with ab321801 at 1/500 (1.0 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/ab150081 1000 2ug/ml dilution (Green).

Confocal image showing cytoplasmic and membranous staining in WEHI-231 cell line (shown in green). The counterstain was observed in magenta. Nuclear DNA was labelled with DAPI (shown in blue).
Negative control: EL4.
Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/ab195889 200 2.5ug/ml dilution (Magenta). The Nuclear counterstain was DAPI (Blue).

Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/ab150081 1000 2ug/ml dilution.

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