abcam

ab155344

PerCP/Cy5.5® Anti-CD79a antibody [HM47]

Anti-CD79a antibody [HM47] conjugated to PerCP/Cy5.5® - suitable for flow cytometry, and reacts with human samples. Clone [HM47] is a mouse monoclonal antibody cited in 22 publications.

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Key facts

Isotype	IgG1
Host species	Mouse
Conjugation	PerCP/Cy5.5®
Excitation/Emission	Ex: 482nm, Em: 695nm
Storage buffer	pH: 7.2 Preservative: 0.09% Sodium azide Constituents: PBS, 0.2% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Fragment Protein within Human CD79A. The exact immunogen used to generate this antibody is proprietary information. Database link P11912
Clone number	HM47
Purification technique	Affinity purification Protein G
Light chain type	kappa

Reactivity data

Flow Cyt

Tested

Species	Human

Dilution info	5 µL for 10^6 Cells
Notes	ab157226 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

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

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

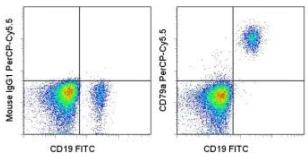
We do not recommend this combination. It is not covered by our product promise.

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.

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1 product image



Flow Cytometry - PerCP/Cy5.5® Anti-CD79a antibody [HM47] (ab155344)

CD79a Flow Cytometry staining using mouse Anti-CD79a antibody

Flow cytometric analysis of normal Human peripheral blood cells with Anti-Human CD19 FITC followed by intracellular staining with Mouse IgG1 K Isotype Control PerCP-Cy5.5 (left) or ab155344 (right) using IC Fixation and Permeabilization Buffers. Cells in the lymphocyte gate were used for analysis.

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