

# Anti-CD79a Antibody Picoband™ (monoclonal, 4G4)

Catalog # ABO14890

## Product Information

|                          |                                                                                                                    |
|--------------------------|--------------------------------------------------------------------------------------------------------------------|
| <b>Application</b>       | WB, IHC                                                                                                            |
| <b>Primary Accession</b> | <a href="#">P11912</a>                                                                                             |
| <b>Host</b>              | Mouse                                                                                                              |
| <b>Isotype</b>           | Mouse IgG1                                                                                                         |
| <b>Reactivity</b>        | Human                                                                                                              |
| <b>Clonality</b>         | Monoclonal                                                                                                         |
| <b>Format</b>            | Lyophilized                                                                                                        |
| <b>Description</b>       | Anti-CD79a Antibody Picoband™ (monoclonal, 4G4) . Tested in IHC, WB applications. This antibody reacts with Human. |
| <b>Reconstitution</b>    | Add 0.2ml of distilled water will yield a concentration of 500 µg/ml.                                              |

## Additional Information

|                                 |                                                                                                                                                                                                                |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene ID</b>                  | 973                                                                                                                                                                                                            |
| <b>Other Names</b>              | B-cell antigen receptor complex-associated protein alpha chain, Ig-alpha, MB-1 membrane glycoprotein, Membrane-bound immunoglobulin-associated protein, Surface IgM-associated protein, CD79a, CD79A, IGA, MB1 |
| <b>Calculated MW</b>            | 25038                                                                                                                                                                                                          |
| <b>Application Details</b>      | Western blot, 0.1-0.5 µg/ml, Human<br>Immunohistochemistry (Paraffin-embedded Section), 0.5-1 µg/ml, Human, By Heat                                                                                            |
| <b>Subcellular Localization</b> | Cell membrane; Single-pass type I membrane protein                                                                                                                                                             |
| <b>Tissue Specificity</b>       | B-cells.                                                                                                                                                                                                       |
| <b>Source</b>                   | Eukaryota                                                                                                                                                                                                      |
| <b>Contents</b>                 | Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na <sub>2</sub> HPO <sub>4</sub> , 0.05mg NaN <sub>3</sub> .                                                                                               |
| <b>Clone Names</b>              | Clone: 4G4                                                                                                                                                                                                     |
| <b>Immunogen</b>                | E.coli-derived human CD79a recombinant protein (Position: T121-P226). Human CD79a shares 91% amino acid (aa) sequence identity with mouse CD79a.                                                               |
| <b>Cross Reactivity</b>         | No cross-reactivity with other proteins.                                                                                                                                                                       |
| <b>Storage</b>                  | Store at -20° C for one year from date of receipt. After reconstitution, at 4° C for one month. It can also be aliquotted and stored frozen at -20° C for six                                                  |

months. Avoid repeated freeze-thaw cycles.

## Protein Information

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|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Name</b>              | CD79A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Synonyms</b>          | IGA, MB1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Function</b>          | 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. |
| <b>Cellular Location</b> | Cell membrane; Single-pass type I membrane protein. Note=Following antigen binding, the BCR has been shown to translocate from detergent-soluble regions of the cell membrane to lipid rafts although signal transduction through the complex can also occur outside lipid rafts.                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Tissue Location</b>   | B-cells.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

## Background

Cluster of differentiation CD79A also known as B-cell antigen receptor complex-associated protein alpha chain and MB-1 membrane glycoprotein, is a protein that in humans is encoded by the CD79A gene. It is mapped to 19q13.2. CD79A is a membrane protein with an extracellular immunoglobulin domain, a single span transmembrane region and a short cytoplasmic domain. Genetic deletion of the transmembrane exon of CD79A results in loss of CD79A protein and a complete block of B cell development at the pro to pre B cell transition. Similarly, humans with homozygous splice variants in CD79A predicted to result in loss of the transmembrane region and a truncated or absent protein display agammaglobulinemia and no peripheral B cells.

## Images

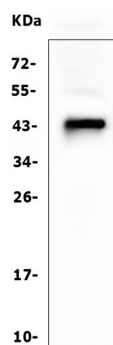


Figure 1. Western blot analysis of CD79A using anti ZO-1 antibody (M01047-3).

Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.

Lane 1: human Raji tissue lysates,

After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with mouse anti-CD79A antigen affinity purified polyclonal antibody (Catalog # M01047-3) at 0.5 µg/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-mouse IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1001) with Tanon 5200

system. A specific band was detected for CD79A at approximately 44KD. The expected band size for CD79A is at 25KD.

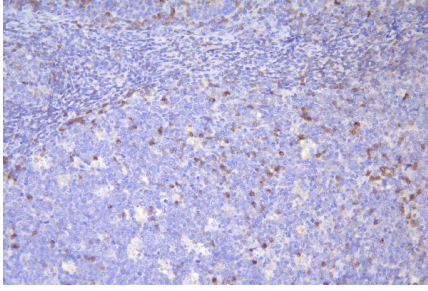


Figure 2. IHC analysis of CD79A using anti-CD79A antibody (M01047-3). CD79A was detected in paraffin-embedded section of human tonsil cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 µg/ml mouse anti-CD79A Antibody (M01047-3) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

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