Monoclonal Anti-mouse CD79B-APC

Catalog Number: FAB7326A
Lot Number: ACQZ01
100 Tests

Reagents Provided

Allophycocyanin (APC)-conjugated rat monoclonal anti-mouse CD79B: Supplied as 25 μg of antibody in 1 mL saline containing up to 0.5% BSA and 0.1% sodium azide.

Clone #: 735451

Isotype: rat IgG_{2A}

Reagents Not Provided

- Flow Cytometry Staining Buffer (Catalog # FC001) or other BSA-supplemented saline buffer.

Storage

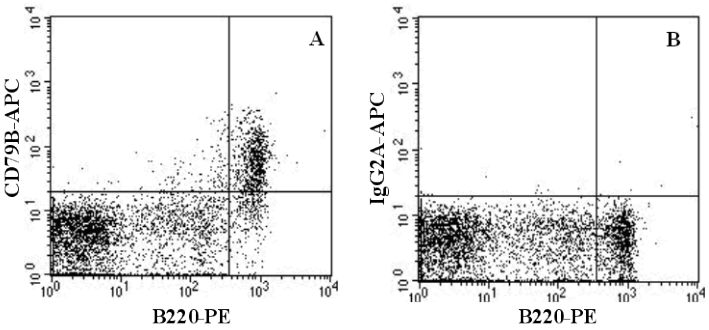
Reagents are stable for **twelve months** from the date of receipt when stored in the dark at 2-8 °C.

Intended Use

Designed to quantitatively determine the percentage of cells bearing CD79B within a population and qualitatively determine the density of CD79B on cell surfaces by flow cytometry.

Product Description

This antibody was produced from a hybridoma resulting from the fusion of a mouse myeloma with B cells obtained from a rat immunized with purified CHO cell-derived recombinant mouse CD79B extracellular domain (Accession # P15530). The IgG fraction of the tissue culture supernatant was purified by Protein A or G affinity chromatography. The purified antibody was then conjugated to APC fluorochrome. Cell surface expression of CD79B is determined by flow cytometry using 620-650 nm wavelength excitation and monitoring emitted fluorescence with a detector optimized to collect peak emissions at 660-670 nm.



Mouse bone marrow cells were stained with PE-conjugated anti-mouse B220 (Catalog # FAB1217P) and either A) APC-conjugated anti-mouse CD79B (Catalog # FAB7326A) or B) isotype control (Catalog # IC006A).

Background Information

CD79B (also known as B29, Igβ and B cell antigen receptor complex-associated protein β-chain) is a 37-39 kDa member of the Ig superfamily. It is expressed on B cells and forms a covalent heterodimer with CD79A. This complex interacts noncovalently with membrane Ig, forming the B cell antigen receptor. Within this complex, membrane Ig detects antigen while CD79A:B initiates signaling. CD79B is also required for the formation of pre-B cells during B cell development. Mature mouse CD79B is a 203 amino acid (aa) type I transmembrane glycoprotein (aa 26-228). It contains an extracellular region with one V-type Ig-like domain (aa 41-132) and an ITAM-containing cytoplasmic domain (aa 181-228). CD79B may migrate as two bands in SDS-PAGE. One defines the standard 37 kDa form, while the second represents one of two possible isoforms, the first of which is an underglycosylated full-length CD79B, and the second of which is an alternative splice form that likely lacks the C-terminal 32 amino acids. Mouse CD79A and CD79B share only 24% aa identity. Over aa 29-158, mouse CD79B shares 54% and 78% aa identity with human and rat CD79B, respectively.

Flow Cytometry Validation

This antibody has been tested for flow cytometry using mouse bone marrow cells.

1. Cells may be Fc-blocked with 1 μg of mouse IgG/10^5 cells for 15 minutes at room temperature. Do not wash excess blocking IgG from this reaction.
2. After blocking, 10 μL of conjugated antibody was added to up to 1 x 10^6 cells and incubated for 30 minutes at room temperature.
3. Unbound antibody was removed by washing the cells twice in Flow Cytometry Staining Buffer (Catalog # FC001). Note that whole blood requires a RBC lysis step at this point using Flow Cytometry Mouse Lyse Buffer (Catalog # FC003).
4. The cells were resuspended in Flow Cytometry Staining Buffer for final flow cytometric analysis. As a control for this analysis, cells in a separate tube should be treated with APC-labeled rat IgG_{2A} antibody. This procedure may need to be modified, depending upon the cell type and final utilization. Individual users may need to titrate to determine the optimal reagent amount for their specific use.

Warning: Contains sodium azide as a preservative - sodium azide may react with lead and copper plumbing to form explosive metal azides. Flush with large volumes of water during disposal.

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