Monoclonal Anti-human CD94-Phycoerythrin

Catalog Number: FAB1058P
Lot Number: LAL01
100 tests

Reagents Provided

Phycoerythrin (PE)-conjugated mouse monoclonal anti-human CD94: Supplied as 25 μg of antibody in 1 mL saline containing up to 0.5% BSA and 0.1% sodium azide.

Clone #: 131412

Isotype: mouse IgG_1

Reagents Not Provided

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

Storage

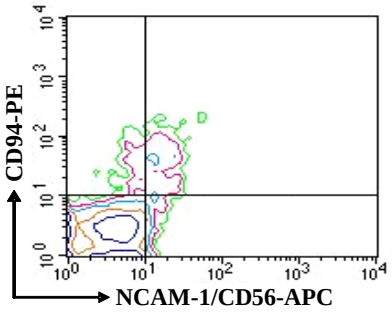
Reagents are stable for **twelve months** from the date of receipt when stored in the dark at 2° - 8° C.

Intended Use

Designed to quantitatively determine the percentage of cells bearing CD94 within a population and qualitatively determine the density of CD94 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 mouse immunized with Ba/F3 cells transfected with human CD94 and NKG2A. The IgG fraction of the tissue culture supernatant was purified by Protein G affinity chromatography. The purified antibody was then conjugated to PE fluorochrome. Cell surface expression of CD94 is determined by flow cytometry using 488 nm wavelength excitation and monitoring emitted fluorescence with a detector optimized to collect peak emissions at 565 - 605 nm.



PBMCs were stained with PE-conjugated anti-human CD94 (Catalog# FAB1058P) and APC-conjugated anti-human NCAM-1/CD56 (Catalog # FAB2408A; a NK cell marker).

Background Information

CD94 is a 30 kDa type II transmembrane protein with an extracellular C-type lectin domain. It is expressed by natural killer (NK) cells and a subset of $CD8^+$ T cells, with cellular activation resulting in increased cell surface expression. Although CD94 can occur as a non-signaling homodimer, functional activity occurs when CD94 exists as a heterodimer with a NKG2 family member. The CD94/NKG2A heterodimer delivers an inhibitory signal to the expressing cell, whereas, the CD94/NKG2C heterodimer associates with the DAP12 adaptor protein and delivers an activating signal. Both heterodimeric complexes recognize HLA-E with an associated peptide derived from the signal peptide of other HLA proteins.

Flow Cytometry Validation

This antibody has been tested for flow cytometry using PBMCs.

1. Cells may be Fc-blocked with 1 μg of human 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 Human Lyse Buffer (Catalog # FC002).
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 PE-labeled mouse IgG_1 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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