Monoclonal Anti-human CD1a-PerCP

Catalog Number: FAB7076C
Lot Number: ADKP01
100 Tests

Reagents Provided

PerCP-conjugated mouse monoclonal anti-human CD1a: Supplied as 25 μg of antibody in 1 mL saline containing up to 0.5% BSA and 0.09% sodium azide.

Clone #: 703217

Isotype: mouse IgG_1

Reagents Not Provided

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

Storage

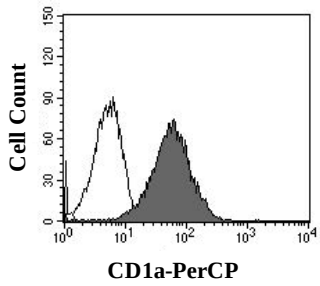
Reagents are stable for **twelve months** from the date of receipt when stored in the dark at 2-8 °C.

Intended Use

Designed to quantitatively determine the percentage of cells bearing CD1a within a population and qualitatively determine the density of CD1a 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 purified NS0-derived recombinant human CD1a (rhCD1a; aa 1-300; Accession # P06126). The IgG fraction of the tissue culture supernatant was purified by Protein G affinity chromatography. The purified antibody was then conjugated to PerCP fluorochrome. Cell surface expression of CD1a is determined by flow cytometry. PerCP has a maximum absorption of 482 nm and 564 nm and a maximum emission of 675 nm.



Molt-4 cells were stained with PerCP-conjugated anti-human CD1a (Catalog # FAB7076C; filled histogram) or PerCP-conjugated isotype control (Catalog # IC002C; open histogram).

Background Information

CD1a is a 49 kDa transmembrane glycoprotein in the CD1 family of glycolipid antigen-presenting MHC-like molecules. CD1a contains one Ig-like domain in its extracellular region. It is expressed by most mammals but not by mice or rats. Complexes of CD1a with β2-microglobulin and endogenous glycolipids are constitutively expressed on antigen-presenting cells, cortical thymocytes, and Langerhans cells. CD1a is a target of autoreactive Th22 helper T cells in the skin.

Flow Cytometry Validation

This antibody has been tested for flow cytometry using Molt-4 cells.

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 PerCP-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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