Technical Data Sheet

PE Mouse Anti-Human CD1d

Product Information

Material Number: 561757
Alternate Name: R3; R3G1; HMC class I antigen-like glycoprotein CD1D
Size: 25 Tests
Vol. per Test: 20 µl
Clone: CD1d42 (also known as 42.1)
Immunogen: Human CD1d Recombinant Protein
Isotype: Mouse (BALB/c) IgG1, κ
Reactivity: QC Testing: Human
Storage Buffer: Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The CD1d42 monoclonal antibody recognizes CD1d. Cell surface CD1d is structurally homologous to Class I MHC molecules. It consists of a glycosylated type I transmembrane α chain (43-49 kDa) that is non-covalently associated with β2-microglobulin. CD1d is a member of the CD1 family of molecules, which belong to the immunoglobulin superfamily. Sequence homology data classifies the CD1D molecules into two groups. Group 1 includes CD1a, CD1b and CD1c molecules; group 2 includes CD1D molecules and their homologs in other species. CD1D is expressed on cortical thymocytes, B cells, dendritic cells, monocytes, and some nonlymphoid cells including intestinal epithelial cells, hepatocytes and keratinocytes. It is not expressed on resting mature T cells. Studies suggest that CD1D participates in lipid antigen presentation to CD1D-restricted NKT cells.

Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.
The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
The antibody was conjugated with R-PE under optimum conditions, and unconjugated antibody and free PE were removed.

Application Notes

Application
Flow cytometry Routinely Tested

Suggested Companion Products

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<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
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<td>PE Mouse IgG1, κ Isotype Control</td>
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<td>550255</td>
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<td>100 Tests</td>
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Flow cytometric analysis of CD1d expression on human peripheral blood lymphocytes. Whole blood was stained with PE Mouse Anti-Human CD1d (Cat. No. 550255/561757; solid line histogram) and PE Mouse IgG1, κ Isotype Control (Cat. No.555749; dashed line histogram). Erythrocytes were lysed with BD FACS Lysing Solution (Cat. No. 349202). The fluorescence histogram was derived from gated events with the forward and side light-scattering characteristics of viable lymphocytes.
Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use $1 \times 10^6$ cells in a 100-µl experimental sample (a test).

2. An isotype control should be used at the same concentration as the antibody of interest.

3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.

4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

5. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at wwwbdbiosciences.com/colors.

6. Please refer to wwwbdbiosciences.com/pharmingen/protocols for technical protocols.

References


Hong S, Scherer DC, Singh N. Lipid antigen presentation in the immune system: lessons learned from CD1d knockout mice. Immunol Rev. 1999; 169:31-44. (Biology)

Kishimoto T, Tadamitsu Kishimoto .. et al., ed. Leucocyte typing VI : white cell differentiation antigens : proceedings of the sixth international workshop and conference held in Kobe, Japan, 10-14 November 1996. New York: Garland Pub.; 1997(Biology)