

Technical Data Sheet

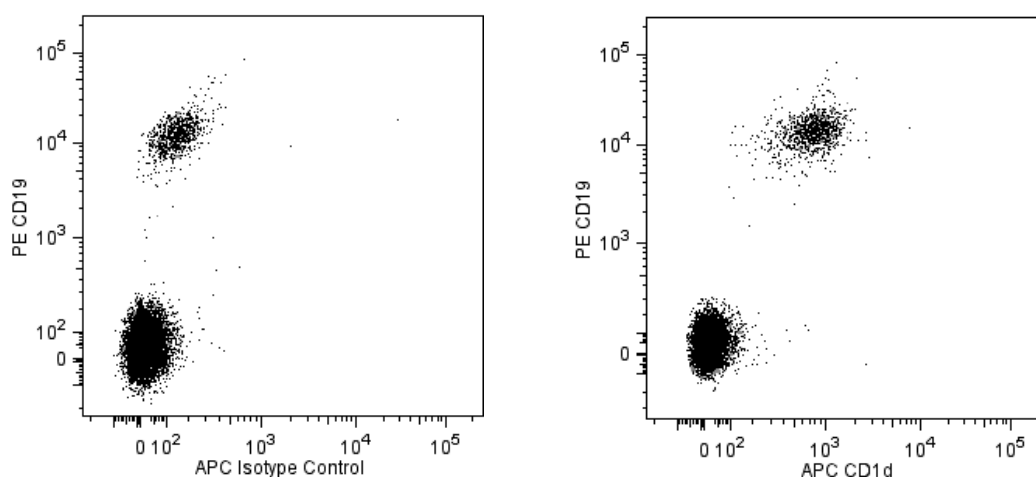
APC Mouse Anti-Human CD1d

Product Information

| | |
|-------------------------|---|
| Material Number: | 563505 |
| Alternate Name: | R3; R3G1; HMC class I antigen-like glycoprotein CD1D |
| Size: | 100 Tests |
| Vol. per Test: | 5 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 β 2-microglobulin. CD1d is a member of the CD1 family of molecules, which belong to the immunoglobulin superfamily. Sequence homology data classifies the CD1 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.



Two-color flow cytometric analysis of CD1d expression on human peripheral blood lymphocytes. Whole blood was stained with PE Mouse Anti-Human CD19 (Cat. No. 555413/561741) and either APC Mouse IgG1, κ Isotype Control (Cat. No. 550854/555751; left panel) or APC Mouse Anti-Human CD1d (Cat. No. 563505/563626; right panel). Erythrocytes were lysed with Lysing Buffer (Cat. No. 555899). Two-color flow cytometric dot plots show the correlated expression patterns of CD1d (or IgG1 isotype control staining) versus CD19 for gated events with the forward and side light-scattering characteristics of viable lymphocytes. Flow cytometry was performed on a BD™ LSR II.

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 to APC under optimum conditions, and unconjugated antibody and free APC were removed.

Application Notes

Application

| | |
|----------------|------------------|
| Flow cytometry | Routinely Tested |
|----------------|------------------|

BD Biosciences

bdbiosciences.com

United States 877.232.8995 Canada 866.979.9408 Europe 32.2.400.98.95 Japan 0120.8555.90 Asia Pacific 65.6861.0633 Latin America/Caribbean 55.11.5185.9995

For country contact information, visit bdbiosciences.com/contact

Conditions: The information disclosed herein is not to be construed as a recommendation to use the above product in violation of any patents. BD Biosciences will not be held responsible for patent infringement or other violations that may occur with the use of our products. Purchase does not include or carry any right to resell or transfer this product either as a stand-alone product or as a component of another product. Any use of this product other than the permitted use without the express written authorization of Becton, Dickinson and Company is strictly prohibited.

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Not for resale.
© 2017 BD. BD, the BD Logo and all other trademarks are property of Becton, Dickinson and Company.



Suggested Companion Products

| <u>Catalog Number</u> | <u>Name</u> | <u>Size</u> | <u>Clone</u> |
|-----------------------|--|-------------|--------------|
| 554656 | Stain Buffer (FBS) | 500 mL | (none) |
| 563626 | APC Mouse Anti-Human CD1d | 25 Tests | CD1d42 |
| 550854 | APC Mouse IgG1 κ Isotype Control | 50 Tests | MOPC-21 |
| 555751 | APC Mouse IgG1, κ Isotype Control | 100 Tests | MOPC-21 |
| 555899 | Lysing Buffer | 100 mL | (none) |
| 555413 | PE Mouse Anti-Human CD19 | 100 Tests | HIB19 |
| 561741 | PE Mouse Anti-Human CD19 | 25 Tests | HIB19 |
| 554657 | Stain Buffer (BSA) | 500 mL | (none) |
| 349202 | BD FACS™ Lysing Solution | 100 mL | (none) |

Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1×10^6 cells in a 100- μ l experimental sample (a test).
2. An isotype control should be used at the same concentration as the antibody of interest.
3. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
4. 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.
5. This APC-conjugated reagent can be used in any flow cytometer equipped with a dye, HeNe, or red diode laser.
6. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
7. Please refer to www.bdbiosciences.com/pharming/protocols for technical protocols.

References

- Exley M, Garcia J, Wilson SB, et al. CD1d structure and regulation on human thymocytes, peripheral blood T cells, B cells and monocytes. *Immunology*. 2000; 100(1):37-47. (Immunogen: Flow cytometry, Immunohistochemistry, Immunoprecipitation)
- 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, Tadimitsu 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: Flow cytometry)
- Ronger-Savle S, Valladeau J, Claudy A, et al. TGFbeta inhibits CD1d expression on dendritic cells. *J Invest Dermatol*. 2005; 124(1):116-118. (Clone-specific: Flow cytometry)
- Somnay-Wadgaonkar K, Nusrat A, Kim HS. Immunolocalization of CD1d in human intestinal epithelial cells and identification of a beta2-microglobulin-associated form. 1999; 11(3):383-392. (Biology)