

Technical Data Sheet

Biotin Rat Anti-Mouse CD1d

Product Information

Material Number:	553844
Alternate Name:	CD1.1, Ly-38
Size:	0.5 mg
Concentration:	0.5 mg/ml
Clone:	1B1
Immunogen:	Mouse Cd1.1 cDNA-transfected RMA-S mouse T lymphoma and mouse L929 cells
Isotype:	Rat (LEW) IgG2b, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing $\leq 0.09\%$ sodium azide.

Description

The 1B1 antibody reacts with CD1d, a 48-kDa glycoprotein with structural homology to the major histocompatibility complex (MHC) class I molecules. The structure, expression, and functions of CD1 antigens are complex and have been reviewed. mAb 1B1 detects CD1d at varying levels on most types of bone marrow and peripheral leukocytes and on epithelial, dendritic, and lymphoid cells in the thymus. It appears to recognize CD1d only in association with $\beta 2m$. CD1d has been reported to be expressed by gastrointestinal tract epithelium and in the cytoplasm of hepatocytes as detected via immunohistochemical staining of frozen sections with mAb 3C11 (Cat. No. 559871, for the purified antibody), suggesting a possible role for CD1d in mucosal immunity. However, CD1d expression was not detectable, via flow cytometry, on intestinal epithelial cells in studies using the anti-CD1d mAbs 3C11, 1B1, and 9C7. The 1B1 antibody competes with mAb 3C11 in binding to mouse splenocytes.

This antibody is routinely tested by flow cytometric analysis. Other applications were tested at BD Biosciences Pharmingen during antibody development only or reported in the literature.

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody was conjugated with biotin under optimum conditions, and unreacted biotin was removed.

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

Application Notes

Application

Flow cytometry	Routinely Tested
Immunofluorescence	Reported
Immunohistochemistry-frozen	Reported

Recommended Assay Procedure:

Other reported applications include immunofluorescent staining of fixed and permeabilized adherent cell cultures. Use of biotinylated 1B1 antibody for immunohistochemical staining of acetone-fixed frozen sections has also been reported; however we have been unable to reproduce those results at BD Biosciences Pharmingen.

Suggested Companion Products

Catalog Number	Name	Size	Clone
553987	Biotin Rat IgG2b, κ Isotype Control	0.25 mg	A95-1
554061	PE Streptavidin	0.5 mg	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
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.

References

Amano M, Baumgarth N, Dick MD, et al. CD1 expression defines subsets of follicular and marginal zone B cells in the spleen: beta 2-microglobulin-dependent and independent forms. *J Immunol.* 1998; 161(4):1710-1717. (Clone-specific)

Bleicher PA, Balk SP, Hagen SJ, Blumberg RS, Flotte TJ, Terhorst C. Expression of murine CD1 on gastrointestinal epithelium. *Science.* 1990; 250(4981):679-682. (Biology)

Brossay L, Jullien D, Cardell S, et al. Mouse CD1 is mainly expressed on hemopoietic-derived cells. *J Immunol.* 1997; 159(3):1216-1224. (Immunogen: Immunohistochemistry)

BD Biosciences

bdbiosciences.com

United States	Canada	Europe	Japan	Asia Pacific	Latin America/Caribbean
877.232.8995	888.259.0187	32.53.720.550	0120.8555.90	65.6861.0633	55.11.5185.9995

For country-specific contact information, visit bdbiosciences.com/how_to_order/

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.

BD, BD Logo and all other trademarks are the property of Becton, Dickinson and Company. ©2008 BD



Brossay L, Tangri S, Bix M, Cardell S, Locksley R, Kronenberg M. Mouse CD1-autoreactive T cells have diverse patterns of reactivity to CD1+ targets. *J Immunol.* 1998; 160(8):3681-3688. (Clone-specific: Immunofluorescence)

Porcelli SA, Modlin RL. The CD1 system: antigen-presenting molecules for T cell recognition of lipids and glycolipids. *Annu Rev Immunol.* 1999; 17:297-329. (Biology)

Prigozy TI, Naidenko O, Qasba P, et al. Glycolipid antigen processing for presentation by CD1d molecules. *Science.* 2001; 291(5504):664-667. (Clone-specific: Immunofluorescence)

Roark JH, Park SH, Jayawardena J, Kavita U, Shannon M, Bendelac A. CD1.1 expression by mouse antigen-presenting cells and marginal zone B cells. *J Immunol.* 1998; 160(7):3121-3127. (Clone-specific)

Sydora BC, Brossay L, Hagenbaugh A, Kronenberg M, Cheroute H. TAP-independent selection of CD8+ intestinal intraepithelial lymphocytes. *J Immunol.* 1996; 156(11):4209-4216. (Biology)

Szalay G, Ladel CH, Blum C, Brossay L, Kronenberg M, Kaufmann SH. Cutting edge: anti-CD1 monoclonal antibody treatment reverses the production patterns of TGF-beta 2 and Th1 cytokines and ameliorates listeriosis in mice. *J Immunol.* 1999; 162(12):6955-6958. (Clone-specific)