

## Technical Data Sheet

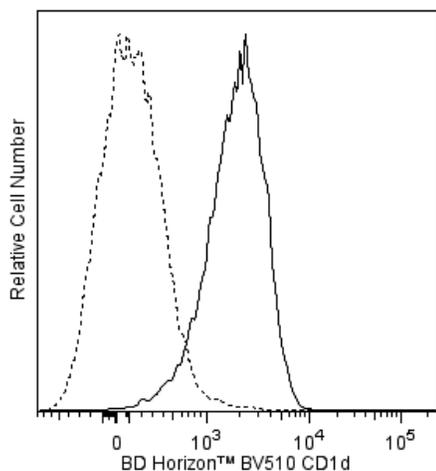
**BV510 Rat Anti-Mouse CD1d****Product Information**

<b>Material Number:</b>	<b>563189</b>
<b>Alternate Name:</b>	Cd1d1; Cd1.1; Cd1a; Cd1d; Ly-38
<b>Size:</b>	50 µg
<b>Concentration:</b>	0.2 mg/ml
<b>Clone:</b>	1B1
<b>Immunogen:</b>	Mouse Cd1.1 cDNA-transfected RMA-S mouse T lymphoma and mouse L929 cells
<b>Isotype:</b>	Rat (LEW) IgG2b, κ
<b>Reactivity:</b>	QC Testing: Mouse
<b>Storage Buffer:</b>	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

**Description**

The 1B1 monoclonal antibody specifically binds to mouse 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 β2m. 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.

The antibody was conjugated to BD Horizon™ BV510 which is part of the BD Horizon™ Brilliant Violet™ family of dyes. With an Ex Max of 405-nm and Em Max at 510-nm, BD Horizon™ BV510 can be excited by the violet laser and detected in the BD Horizon™ V500 (525/50-nm) filter set. BD Horizon™ BV510 conjugates are useful for the detection of dim markers off the violet laser.



**Flow cytometric analysis of CD1d expression on mouse thymocytes.** Thymocytes from a BALB/c mouse were stained with either BD Horizon™ BV510 Rat IgG2b, κ Isotype Control (Cat. No. 562951, dashed line histogram) or with the BD Horizon™ BV510 Rat Anti-Mouse CD1d antibody (Cat. No. 563189, solid line histogram). The fluorescence histograms were derived from gated events with the forward and side light-scatter characteristics of viable thymocytes. Flow cytometry was performed using a BD™ LSR II Flow Cytometer System.

**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 BD Horizon™ BV510 under optimum conditions, and unconjugated antibody and free BD Horizon™ BV510 were removed.

**Application Notes****Application**

Flow cytometry	Routinely Tested
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## Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 ml	(none)
562951	BV510 Rat IgG2b, $\kappa$ Isotype Control	50 $\mu$ g	R35-38

## Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
3. An isotype control should be used at the same concentration as the antibody of interest.
4. Please refer to [wwwbdbiosciences.com/pharming/en/protocols](http://wwwbdbiosciences.com/pharming/en/protocols) for technical protocols.
5. 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.
6. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at [wwwbdbiosciences.com/colors](http://wwwbdbiosciences.com/colors).
7. Brilliant Violet™ 510 is a trademark of Sirigen.

## 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: Flow cytometry)

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: Blocking, Flow cytometry, Immunohistochemistry, Immunoprecipitation, Inhibition)

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)

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: Blocking, Flow cytometry)

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

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: Blocking, Flow cytometry, In vivo exacerbation)

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