

Technical Data Sheet

BV711 Rat Anti-Mouse CD1d

Product Information

Material Number:	740711
Size:	50 µg
Clone:	1B1
Alternative Name:	Cd1d1; Cd1.1; Cd1a; Cd1d; Ly-38
Reactivity:	Mouse (Tested in Development)
Isotype:	Rat LEW, also known as Lewis IgG2b, κ
Immunogen:	Mouse Cd1.1 cDNA-transfected RMA-S mouse T lymphoma and L929 cells
Application:	Flow cytometry (Qualified)
Concentration:	0.2 mg/ml
Entrez Gene ID:	12479
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.
Regulatory Status:	RUO

Description

The 1B1 monoclonal antibody specifically binds to mouse CD1d, a 48-kDa glycoprotein with structural homology to 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 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™ BV711 which is part of the BD Horizon Brilliant™ Violet family of dyes. This dye is a tandem fluorochrome of BD Horizon BV421 with an Ex Max of 405-nm and an acceptor dye with an Em Max at 711-nm. BD Horizon BV711 can be excited by the violet laser and detected in a filter used to detect Cy™5.5 / Alexa Fluor® 700-like dyes (eg, 712/20-nm filter). Due to the excitation and emission characteristics of the acceptor dye, there may be moderate spillover into the Alexa Fluor® 700 and PerCP-Cy5.5 detectors. However, the spillover can be corrected through compensation as with any other dye combination.

Preparation and Storage Section

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 the dye under optimum conditions that minimize unconjugated dye and antibody.

Recommended Assay Procedure

For optimal and reproducible results, BD Horizon Brilliant Stain Buffer should be used anytime two or more BD Horizon Brilliant dyes (including BD OptiBuild Brilliant reagents) are used in the same experiment. Fluorescent dye interactions may cause staining artifacts which may affect data interpretation. The BD Horizon Brilliant Stain Buffer was designed to minimize these interactions. More information can be found in the Technical Data Sheet of the BD Horizon Brilliant Stain Buffer (Cat. No. 563794).

Suggested Companion Products

Catalog Number	Name	Size	Clone
553141	Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™) 2.4G2 RUO	0.1 mg	
563794	Brilliant Stain Buffer RUO	100 Tests	
563045	BV711 Rat IgG2b, κ Isotype Control RUO	50 µg	
566385	Brilliant Stain Buffer Plus RUO	1000 Tests	
554657	Stain Buffer (BSA) RUO	500 mL	
566349	Brilliant Stain Buffer RUO	1000 Tests	

555899 Lysing Buffer RUO
554656 Stain Buffer (FBS) RUO

100 mL
500 mL

Product Notices

1. The production process underwent stringent testing and validation to assure that it generates a high-quality conjugate with consistent performance and specific binding activity. However, verification testing has not been performed on all conjugate lots.
2. Researchers should determine the optimal concentration of this reagent for their individual applications.
3. An isotype control should be used at the same concentration as the antibody of interest.
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. 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/us/s/resources for technical protocols.
7. BD Horizon Brilliant Stain Buffer is covered by one or more of the following US patents: 8,110,673; 8,158,444; 8,575,303; 8,354,239.
8. BD Horizon Brilliant Violet 711 is covered by one or more of the following US patents: 8,110,673; 8,158,444; 8,227,187; 8,455,613; 8,575,303; 8,354,239.
9. Alexa Fluor® is a registered trademark of Life Technologies Corporation.
10. Please refer to <http://regdocs.bd.com> to access safety data sheets (SDS).
11. Cy is a trademark of GE Healthcare.

References

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