

Technical Data Sheet

BV711 Mouse Anti-Mouse Ly-51

Product Information

Material Number:	740691
Size:	50 µg
Clone:	BP-1
Alternative Name:	Bp-1/6C3; Ly51; Ly-51; Enpep; Glutamyl aminopeptidase; APA; EAP
Reactivity:	Mouse (Tested in Development)
Isotype:	Mouse Mus spretus, also known as STF Mus spretus IgG2a, κ
Immunogen:	Abelson murine leukemia virus-transformed BALB/c mouse pre-B cell line 18.81
Application:	Flow cytometry (Qualified)
Concentration:	0.2 mg/ml
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.
Regulatory Status:	RUO

Description

The BP-1 monoclonal antibody specifically recognizes CD249 which is also known as, 6C3/BP-1, Enpep, or Ly-51. CD249 is a glycoprotein cell-surface differentiation antigen, which was originally identified on pre-B cell lymphomas (spontaneous and chemical- or retrovirus- transformed, in vitro and in vivo). CD249 is a homodimeric cell-surface glycoprotein with 140-kDa subunits that has been identified to possess aminopeptidase A (APA) activity. The same antigen is expressed at high levels on bone marrow stromal cell lines which support in vitro B lymphopoieses, on thymic dendritic cells and cortical epithelial cells, and on a wide variety of mouse and rat tissues known to possess APA activity. Subsets of normal bone marrow pre-B and B lymphocytes express low levels of CD249 which is rapidly up-regulated on the pre-B cells in the presence of IL-7. A role for the CD249 molecule in the IL-7-driven proliferation of B cell precursors has been postulated. However, B-cell abnormalities were not detected in CD249/Ly-51-deficient mice. Mature B lymphocytes, thymocytes, peripheral T lymphocytes, erythroid cells, and myeloid cells (with the exception of thymic dendritic cells) do not express CD249.

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 with BD Horizon BV711 under optimal 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
563345	BV711 Mouse IgG2a, κ Isotype Control RUO	50 µg	
554656	Stain Buffer (FBS) RUO	500 mL	
554657	Stain Buffer (BSA) RUO	500 mL	
563794	Brilliant Stain Buffer RUO	100 Tests	
555899	Lysing Buffer RUO	100 mL	

Product Notices

1. This antibody was developed for use in flow cytometry.
2. 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.
3. Researchers should determine the optimal concentration of this reagent for their individual applications.
4. An isotype control should be used at the same concentration as the antibody of interest.
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.
7. Please refer to wwwbdbiosciences.com/pharming/en/protocols for technical protocols.
8. 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.
9. 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.
10. Cy is a trademark of Amersham Biosciences Limited.
11. Alexa Fluor® is a registered trademark of Life Technologies Corporation.

References

Gass JN, Gifford NM, Brewer JW. Activation of an unfolded protein response during differentiation of antibody-secreting B cells. *J Biol Chem.* 2002; 277(50):49047-49054.

Iwakoshi NN, Lee AH, Vallabhajosyula P, Otipoby KL, Rajewsky K, Glimcher LH. Plasma cell differentiation and the unfolded protein response intersect at the transcription factor XBP-1. *Nat Immunol.* 2003; 4(4):321-329.

Yoshida H, Matsui T, Yamamoto A, Okada T, Mori K. XBP1 mRNA is induced by ATF6 and spliced by IRE1 in response to ER stress to produce a highly active transcription factor. *Cell.* 2001; 107(7):881-891.

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