BD Pharmingen™ Technical Data Sheet

Biotin Rat Anti-Mouse CD249 (Ly-51)

Product Information

Material Number: 553159
Alternate Name: Bp-1/6C3; Ly51; Ly-51; Enpep; Glutamyl aminopeptidase; APA; EAP
Size: 0.5 mg
Concentration: 0.5 mg/ml
Clone: 6C3
Immunogen: C57L mouse Pre-B lymphoma cell line L1-2
Isotype: Rat (F344) IgG2a, κ
Reactivity: QC Testing: Mouse
Storage Buffer: Aqueous buffered solution containing ≤0.09% sodium azide.

Description
The 6C3 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 lymphopoiesis, 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 6C3 antibody can be used to identify cortical epithelium in frozen sections of thymuses from normal, SCID, and TCR-transgenic mice. It is possible that the low level of CD249 antigen detected, by flow cytometry, on some thymocytes may be passively adsorbed from adjacent epithelial cells during preparation of the cell suspensions.

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 biotin under optimum conditions, and unreacted biotin was removed.

Application Notes

Application
Flow cytometry Routinely Tested

Suggested Companion Products

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<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
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<tr>
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<td>PE Streptavidin</td>
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<td>Stain Buffer (BSA)</td>
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Product Notices
1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. An isotype control should be used at the same concentration as the antibody of interest.
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.
4. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.

References


Ramakrishnan L, Wu Q, Yue A, Cooper MD, Rosenberg N. BP-1/6C3 expression defines a differentiation stage of transformed pre-B cells and is not related to malignant potential. *J Immunol.* 1990; 145(5):1603-1608. (Biology)


Wang J, Cooper MD. Histidine residue in the zinc-binding motif of aminopeptidase A is critical for enzymatic activity. *Proc Natl Acad Sci U S A.* 1990; 90(4):1222-1226. (Biology)

Welch PA, Burrows PD, Namen A, Gillis S, Cooper MD. Bone marrow stromal cells and interleukin-7 induce coordinate expression of the BP-1/6C3 antigen and pre-B cell growth. *Int Immunol.* 1990; 2(8):697-705. (Biology)

Welch PA. Regulation of B cell precursor proliferation by aminopeptidase A. *Int Immunol.* 1995; 7(5):737-746. (Biology)


Wu Q, Tidmarsh GF, Welch PA, Pierce JH, Weissman IL, Cooper MD. The early B lineage antigen BP-1 and the transformation-associated antigen 6C3 are on the same molecule. *J Immunol.* 1989; 143(10):3303-3308. (Biology)