

Technical Data Sheet

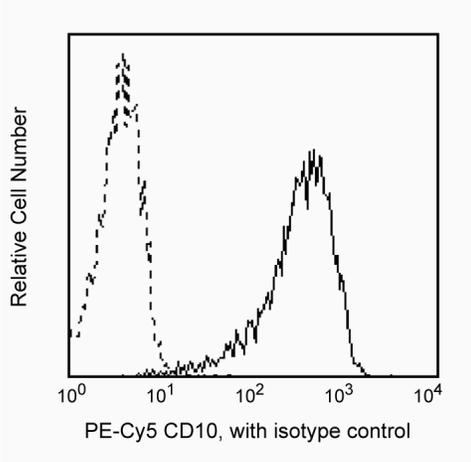
PE-Cy™5 Mouse Anti-Human CD10

Product Information

Material Number:	561676
Alternate Name:	MME; CALLA; EPN; NEP; neprilysin; SFE; atriopeptidase; enkephalinase
Size:	25 Tests
Vol. per Test:	20 µl
Clone:	HI10a
Immunogen:	Acute CALLA Leukemia Blast Cells
Isotype:	Mouse (BALB/c) IgG1, κ
Reactivity:	QC Testing: Human Tested in Development: Rhesus, Cynomolgus, Baboon V CD10.7
Workshop:	V CD10.7
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The HI10a monoclonal antibody specifically binds to CD10 which is also known as Neutral endopeptidase (NEP), Enkephalinase, Atriopeptidase, and Neprilysin. CD10 is encoded by *MME* (membrane metallo-endopeptidase). CD10 is a 100 kDa type II transmembrane glycoprotein that has neutral endopeptidase activity and is otherwise known as the Common Acute Lymphoblastic Leukemia Antigen (CALLA). CD10 is expressed on a wide variety of normal and neoplastic cell types. Normal cells expressing CD10 include granulocytes, bone marrow stromal cells, a subset of B-cell progenitors, germinal center B cells and fibroblasts. This cell surface metalloendopeptidase inactivates a number of signaling molecules and serves as a major regulator in the nervous, immune and other systems.



Flow cytometric analysis of CD10 expression on REH cell line. REH cells were stained with either PE-Cy™5 Mouse Anti-Human CD10 (Cat. No. 555376/561676; solid line histogram) or PE-Cy™5 Mouse IgG1, κ Isotype Control (Cat.No. 555750; dashed line histogram). Fluorescence histograms depicting CD10 (or Ig isotype control) expression were derived from gated events with the side and forward light-scattering characteristics of viable cells. Flow cytometry was performed on a BD FACScan™ 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 PE-Cy5 (formerly known as BD Cy-Chrome™) under optimum conditions, and unconjugated antibody and free PE-Cy5 were removed.

Application Notes

Application

Flow cytometry	Routinely Tested
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Suggested Companion Products

Catalog Number	Name	Size	Clone
555750	PE-Cy™5 Mouse IgG1 κ Isotype Control	100 Tests	MOPC-21
554656	Stain Buffer (FBS)	500 mL	(none)
554657	Stain Buffer (BSA)	500 mL	(none)
555376	PE-Cy™5 Mouse Anti-Human CD10	100 Tests	HI10a

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Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1×10^6 cells in a 100- μ l experimental sample (a test).
2. An isotype control should be used at the same concentration as the antibody of interest.
3. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
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 www.bdbiosciences.com/colors.
6. PE-Cy5 is optimized for use with a single argon ion laser emitting 488-nm light. Because of the broad absorption spectrum of the PE-Cy5 tandem fluorochrome, extra care must be taken when using dual-laser cytometers which may directly excite both PE and Cy5™.
7. PE-Cy5 is a tandem fluorochrome composed of R-phycoerythrin (PE), which is excited by the 488 nm light of an Argon ion laser and serves as an energy donor, coupled to the cyanine dye Cy5, which acts as an energy acceptor and fluoresces at 670 nm. BD Biosciences Pharmingen has maximized the fluorochrome energy transfer in PE-Cy5, thus maximizing its fluorescence emission intensity, minimizing residual emission from PE, and minimizing lot-to-lot variation.
8. PE-Cy5 tandem fluorochromes have been reported to bind some classes of human macrophages and granulocytes via Fc receptors, and PE has been reported to bind to mouse B lymphocytes via Fc receptors. Preincubation of mouse leukocytes with Mouse BD Fc Block™ purified anti-mouse CD16/CD32 mAb 2.4G2 can reduce the non-specific binding of PE-Cy5-conjugated reagents to mouse B cells. However, PE-Cy5 conjugated reagents should not be used to stain splenocytes of SJL, NOD, and MRL mice as B lymphocytes and/or other leukocytes have been reported to non-specifically stain regardless of the use of Mouse BD Fc Block™ (the CD72c complex has been implicated for PE-Cy5 binding in these strains). Reagents conjugated to PE, PerCP, PerCP-Cy5.5, APC, and APC-Cy7 tandem fluorochrome can be used on leukocytes from these mouse strains.
9. Please observe the following precautions: Absorption of visible light can significantly alter the energy transfer occurring in any tandem fluorochrome conjugate; therefore, we recommend that special precautions be taken (such as wrapping vials, tubes, or racks in aluminum foil) to prevent exposure of conjugated reagents, including cells stained with those reagents, to room illumination.
10. Cy is a trademark of GE Healthcare.
11. Species testing during development may have been performed with a different format of the same clone. Selected applications have been tested for cross-reactivity.
12. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

- Barclay NA, Brown MH, Birkeland ML, et al, ed. *The Leukocyte Antigen FactsBook*. San Diego, CA: Academic Press; 1997(Biology)
- Knapp W. W. Knapp .. et al., ed. *Leucocyte typing IV : white cell differentiation antigens*. Oxford New York: Oxford University Press; 1989:1-1182. (Biology)
- Letarte M, Vera S, Tran R, et al. Common acute lymphocytic leukemia antigen is identical to neutral endopeptidase. *J Exp Med*. 1988; 168(4):1247-1253. (Biology)