

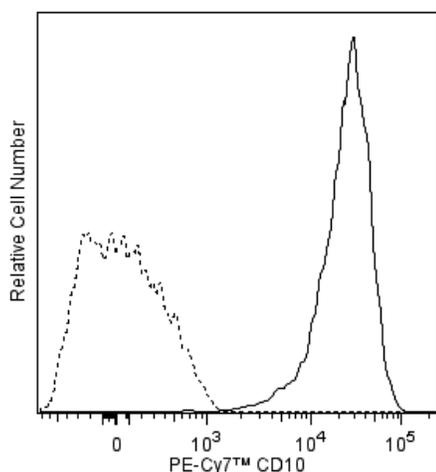
Technical Data Sheet

PE-Cy™7 Mouse Anti-Human CD10**Product Information**

Material Number:	565282
Alternate Name:	MME; CALLA; EPN; NEP; neprilysin; SFE; atriopeptidase; enkephalinase
Size:	100 Tests
Vol. per Test:	5 µl/test
Clone:	HI10a
Immunogen:	Acute CALLA Leukemia Blast Cells
Isotype:	Mouse (BALB/c) IgG1, κ
Reactivity:	QC Testing: Human Tested in Development: Rhesus, Cynomolgus, Baboon
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 human REH cells. Cells from the REH (Acute B cell leukemia, ATCC CRL-8283) cell line were stained with either PE-Cy™7 Mouse IgG1, κ Isotype Control (Cat. No. 557872; dashed line histogram) or PE-Cy™7 Mouse Anti-Human CD10 antibody (Cat. No. 565282; solid line histogram). The fluorescence histogram showing CD10 expression (or Ig Isotype control staining) was derived from gated events with the forward and side light-scatter characteristics of viable cells. Flow cytometric analysis 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 PE-Cy7 under optimum conditions, and unconjugated antibody and free PE-Cy7 were removed.

Application Notes**Application**

Flow cytometry	Routinely Tested
----------------	------------------

Suggested Companion Products

Catalog Number	Name	Size	Clone
557872	PE-Cy™7 Mouse IgG1 κ Isotype Control	100 Tests	MOPC-21
554656	Stain Buffer (FBS)	500 mL	(none)
554657	Stain Buffer (BSA)	500 mL	(none)

BD Biosciences

bdbiosciences.com

United States 877.232.8995 Canada 866.979.9408 Europe 32.2.400.98.95 Japan 0120.8555.90 Asia Pacific 65.6861.0633 Latin America/Caribbean 55.11.5185.9995

For country contact information, visit bdbiosciences.com/contact

Conditions: The information disclosed herein is not to be construed as a recommendation to use the above product in violation of any patents. BD Biosciences will not be held responsible for patent infringement or other violations that may occur with the use of our products. Purchase does not include or carry any right to resell or transfer this product either as a stand-alone product or as a component of another product. Any use of this product other than the permitted use without the express written authorization of Becton, Dickinson and Company is strictly prohibited.

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Not for resale.
© 2017 BD. BD, the BD Logo and all other trademarks are property of Becton, Dickinson and Company.

565282 Rev. 2



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. 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. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
5. 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.
6. Warning: Some APC-Cy7 and PE-Cy7 conjugates show changes in their emission spectrum with prolonged exposure to formaldehyde. If you are unable to analyze fixed samples within four hours, we recommend that you use BD™ Stabilizing Fixative (Cat. No. 338036).
7. Species testing during development may have been performed with a different format of the same clone. Selected applications have been tested for cross-reactivity.
8. PE-Cy7 is a tandem fluorochrome composed of R-phycoerythrin (PE), which is excited by 488-nm light and serves as an energy donor, coupled to the cyanine dye Cy7, which acts as an energy acceptor and fluoresces maximally at 780 nm. PE-Cy7 tandem fluorochrome emission is collected in a detector for fluorescence wavelengths of 750 nm and higher. Although every effort is made to minimize the lot-to-lot variation in the efficiency of the fluorochrome energy transfer, differences in the residual emission from PE may be observed. Therefore, we recommend that individual compensation controls be performed for every PE-Cy7 conjugate. PE-Cy7 is optimized for use with a single argon ion laser emitting 488-nm light, and there is no significant overlap between PE-Cy7 and FITC emission spectra. When using dual-laser cytometers, which may directly excite both PE and Cy7, we recommend the use of cross-beam compensation during data acquisition or software compensation during data analysis.
9. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
10. Cy is a trademark of GE Healthcare.
11. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

- Zola H. CD10 Workshop Panel report. In: Schlossman SF, Stuart F, Schlossman .. et al., ed. *Leukocyte typing V : white cell differentiation antigens : proceedings of the fifth international workshop and conference held in Boston, USA, 3-7 November, 1993*. Oxford: Oxford University Press; 1995:505-507. (Immunogen: Flow cytometry)
- Chen X, Laur O, Kambayashi T, et al. Regulated expression of human histocompatibility leukocyte antigen (HLA)-DO during antigen-dependent and antigen-independent phases of B cell development. *J Exp Med*. 2002; 195(8):1053-1062. (Biology)
- Lin G-X, Yang X, Hollemweguer E, et al. Cross-reactivity of CD antibodies in eight animal species. In: Mason D, David Mason .. et al., ed. *Leukocyte typing VII : white cell differentiation antigens : proceedings of the Seventh International Workshop and Conference held in Harrogate, United Kingdom*. Oxford: Oxford University Press; 2002:519-523. (Clone-specific: Flow cytometry)
- 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)
- Maguer-Satta V, Besancon R, Bachelard-Cascales E. Concise review: neutral endopeptidase (CD10): a multifaceted environment actor in stem cells, physiological mechanisms, and cancer. *Stem Cells*. 2011; 29(3):389-396. (Biology)
- Zola H. *Leukocyte and stromal cell molecules : the CD markers*. Hoboken, N.J.: Wiley-Liss; 2007(Biology)