Technical Data Sheet

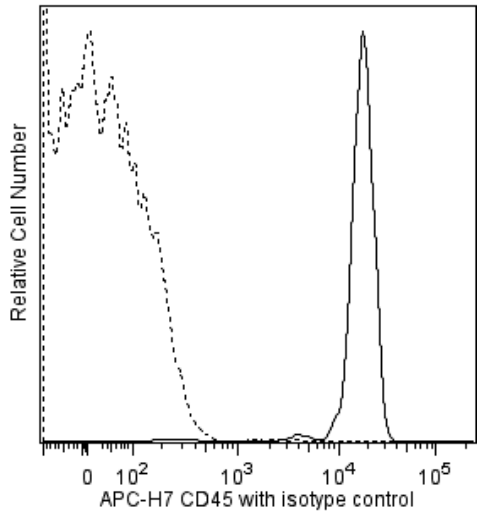
APC-H7 Mouse anti-Human CD45

Product Information

Material Number:	**560178**
Alternate Name:	Leukocyte Common Antigen
Size:	100 tests
Vol. per Test:	5µl
Clone:	2D1
Isotype:	Mouse IgG1, κ
Reactivity:	QC Testing: Human
Workshop:	NA
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The clone 2D1 recognizes the CD45 antigen, a tyrosine phosphatase. There are several isoforms of CD45 with molecular weights ranging from 180 to 220 kDa and all are members of the T200 family. The CD45 antigen is present on all human leukocytes, including lymphocytes, monocytes, granulocytes, eosinophils and basophils in peripheral blood and has a role in signal transduction modifying signals from other surface molecules.



Flow cytometric analysis of APC-H7 anti-human CD45 on human lymphocytes. *Whole blood was stained with APC-H7 anti-human CD45 (clone 2D1 , Cat. No. 560178) and compared to whole blood stained with a APC-H7 mouse IgG1 isotype control (clone MOPC-21, Cat. No. 560167). The isotype control is represented by a dashed line and the APC-H7 anti-human CD45 by the solid line. Lymphocytes were selected by scatter profile. Flow cytometry was performed on a BD™ LSR II flow cytometry 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 APC-H7 under optimum conditions, and unconjugated antibody and APC-H7 were removed.

Application Notes

Application

Flow cytometry	Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
560167	APC-H7 Mouse IgG1, κ Isotype Control	0.1 mg	MOPC-21

BD Biosciences

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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 × 10e6 cells in a 100-µl experimental sample (a test).
2. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
3. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
4. BD APC-H7 is a tandem conjugate and an analog of APC-Cy™7 with the same spectral properties. It has decreased intensity but it is engineered for greater stability and less spillover in the APC channel and consequently offers better performance than APC-Cy7. It has an absorption maximum of approximately 650 nm. When excited by light from a red laser, the APC fluorochrome can transfer energy to the cyanine dye, which then emits at a longer wavelength. The resulting fluorescent emission maximum is approximately 767 nm. BD recommends that a 750-nm longpass filter be used along with a red-sensitive detector such as the Hamamatsu R3896 PMT. As with APC-Cy7 special filters are required when using APC-H7 in conjunction with APC.
   Note: Although our APC-H7 products demonstrate higher lot-to lot consistency than other APC tandem conjugate products, and every effort is made to minimize the lot-to-lot variation in residual emission from APC, it is strongly recommended that every lot be tested for differences in the amount of compensation required and that individual compensation controls are run for each APC-H7 conjugate.
   Note: Cy™ is a trademark of Amersham Biosciences Limited.
5. Although BD APC-H7 is engineered to minimize spillover to the APC channel and is more stable and less affected by light, temperature, and formaldehyde-based fixatives, compared to other APC-cyanine tandem dyes, it is still good practice to minimize as much as possible, any light, temperature and fixative exposure when working with all fluorescent conjugates.
6. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/pharmingen/colors.
7. 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.
8. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

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Hermiston ML, Xu Z, Weiss A. CD45: a critical regulator of signaling thresholds in immune cells. *Annu Rev Immunol.* 2003; 21:107-137.(Biology)

Loken MR, Brosnan JM, Bach BA, Ault KA. Establishing optimal lymphocyte gates for immunophenotyping by flow cytometry. *Cytometry.* 1990; 11(4):453-459. (Biology)

Terstappen LW, Levin J. Bone marrow cell differential counts obtained by multidimensional flow cytometry. *Blood Cells.* 1992; 18(2):311-330.(Biology)

Trowbridge IS, Thomas ML. CD45: an emerging role as a protein tyrosine phosphatase required for lymphocyte activation and development. *Annu Rev Immunol.* 1994; 12:85-116.(Biology)