Technical Data Sheet

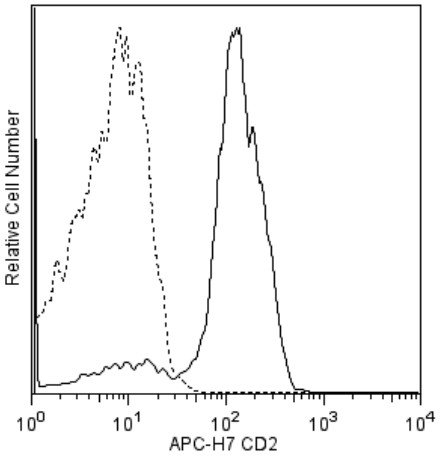
APC-H7 Mouse Anti-Human CD2

Product Information

Material Number:	**562638**
Alternate Name:	LFA-2; Lymphocyte function antigen-2; T11/Leu-5; Rosette receptor
Size:	100 Tests
Vol. per Test:	5 µl
Clone:	RPA-2.10
Immunogen:	Human Phytohemagglutinin-treated Lymphoblasts
Isotype:	Mouse (BALB/c) IgG1, κ
Reactivity:	QC Testing: Human Tested in Development: Rhesus, Cynomolgus, Baboon
Workshop:	IV T085
Storage Buffer:	Aqueous buffered solution containing BSA, protein stabilizer, and ≤0.09% sodium azide.

Description

The RPA-2.10 monoclonal antibody specifically binds to CD2. CD2 is a 50 kDa single-chain transmembrane glycoprotein, also known as LFA-2 or the receptor for sheep erythrocytes. CD2 belongs to the immunoglobulin superfamily of proteins along with its ligand LFA-3, CD58. It is present on about 80-90% of human peripheral blood lymphocytes, greater than 95% of thymocytes, all T lymphocytes that form E-rosettes and a subset of NK cells. CD2 plays a role in T-cell signaling and in lymphocyte adhesion.



Flow cytometric analysis of CD2 expression on human peripheral blood lymphocytes. *Whole blood was stained with APC-H7 Mouse Anti-Human CD2 antibody (Cat. No. 562638; solid line histogram) or with APC-H7 Mouse IgG1, κ Isotype Control (Cat. No. 560167; dashed line histogram). Erythrocytes were lysed with BD Pharm Lyse™ Lysing Buffer (Cat. No. 555899). The fluorescence histograms were derived from gated events with the forward and side light-scatter characteristics of viable lymphocytes. Flow cytometry 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 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
554656	Stain Buffer (FBS)	500 mL	(none)
555899	Lysing Buffer	100 mL	(none)
349202	BD FACS™ Lysing Solution	100 mL	(none)
554657	Stain Buffer (BSA)	500 mL	(none)

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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-µl experimental sample (a test).
2. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
3. An isotype control should be used at the same concentration as the antibody of interest.
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. 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.
7. BD APC-H7 is a tandem conjugate and an analog of APC-Cy7 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.
8. 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.
9. Cy is a trademark of GE Healthcare.
10. Species testing during development may have been performed with a different format of the same clone. Selected applications have been tested for cross-reactivity.
11. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

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Hahn WC, Burakoff SJ, Bierer BE. Signal transduction pathways involved in T cell receptor-induced regulation of CD2 avidity for CD58. *J Immunol.* 1993; 150(7):2607-2619. (Biology)

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Suranyi MG, Bishop GA, Clayberger C, et al. Lymphocyte adhesion molecules in T cell-mediated lysis of human kidney cells. *Kidney Int.* 1991; 39(2):312-319. (Clone-specific: Flow cytometry, Functional assay, Inhibition)