Technical Data Sheet

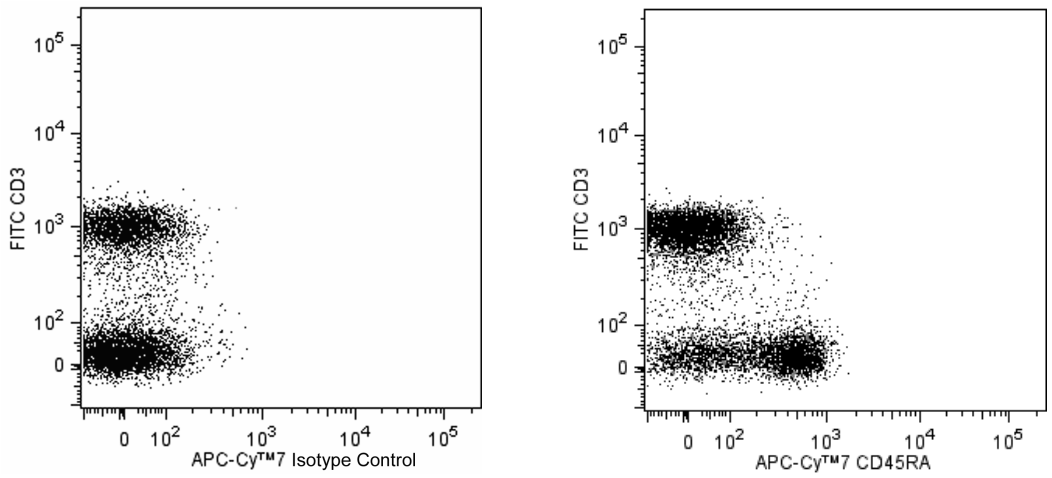
APC-Cy™7 Mouse Anti-Rat CD45RA

Product Information

Material Number:	**561624**
Alternate Name:	Ptprc; Lca; Leucocyte common antigen
Size:	50 µg
Concentration:	0.2 mg/ml
Clone:	OX-33
Immunogen:	Leukocyte common antigen purified from rat splenocytes
Isotype:	Mouse (BALB/c) IgG1, κ
Reactivity:	QC Testing: Rat
Storage Buffer:	Aqueous buffered solution containing protein stabilizer and ≤0.09% sodium azide.

Description

The OX-33 antibody specifically recognizes a high-molecular-weight form of CD45 found only on B lymphocytes. CD45 is a member of the Protein Tyrosine Phosphatase (PTP) family: Its intracellular (COOH-terminal) region contains two PTP catalytic domains, and the extracellular region is highly variable due to alternative splicing of exons 4, 5, and 6 (designated A, B, and C, respectively), plus differing levels of glycosylation. The CD45 isoforms detected in the rat are cell type-, maturation-, and activation state-specific. The CD45 isoforms play complex roles in T-cell and B-cell antigen receptor signal transduction.



Multicolor flow cytometric analysis of CD45RA expression on rat splenocytes. *Splenocytes from a Lewis rat were stained with a FITC Mouse Anti-Rat CD3 antibody (Cat. No. 559975/554832) and with either APC-Cy™7 Mouse IgG1, κ Isotype Control (Cat. No. 557873, Left Panel) or an APC-Cy™7 Mouse Anti-Rat CD45RA antibody (Cat. No. 561624, Right Panel). Two-color dot plots showing the correlated expression of CD45RA (or Ig isotype control staining) versus CD3 were derived from gated events with the forward and side light-scatter characteristics of viable splenocytes. Flow cytometry was performed using 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-Cy7 under optimum conditions, and unconjugated antibody and free APC-Cy7 were removed.

Application Notes

Application

Flow cytometry	Routinely Tested

BD Biosciences

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Suggested Companion Products

Catalog Number	Name	Size	Clone
557873	APC-Cy™7 Mouse IgG1, κ Isotype Control	100 Tests	MOPC-21
554656	Stain Buffer (FBS)	500 mL	(none)
559975	FITC Mouse Anti-Rat CD3	0.1 mg	G4.18
554832	FITC Mouse Anti-Rat CD3	0.5 mg	G4.18
554657	Stain Buffer (BSA)	500 mL	(none)

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. APC-Cy7 is a tandem fluorochrome composed of Allophycocyanin (APC), which is excited by laser lines between 595 and 647 nm and serves as an energy donor, coupled to the cyanine dye Cy7™, which acts as an energy acceptor and fluoresces at 780 nm. BD Biosciences Pharmingen has maximized the fluorochrome energy transfer in APC-Cy7, thus maximizing its fluorescence emission intensity, minimizing residual emission from APC, and minimizing required electronic compensation in multilaser-laser flow cytometry systems. Note: Although 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-Cy7 conjugate.
5. APC-Cy7 tandem fluorochrome emission is collected in a detector for fluorescence wavelengths of 750 nm and higher.
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. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
8. 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).
9. Cy is a trademark of GE Healthcare.
10. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

Johnson P, Maiti A, Ng DHW. CD45: A family of leukocyte-specific cell surface glycoproteins. In: Herzenberg LA, Weir DM, Herzenberg LA, Blackwell C , ed. *Weir's Handbook of Experimental Immunology, Vol 2.* Cambridge: Blackwell Science; 1997:62.1-62.16. (Biology)

Woollett GR, Barclay AN, et al. Molecular and antigenic heterogeneity of the rat leukocyte common antigen from thymocytes and T and B lymphocytes. . *Eur J Immunol.* 1985; 15:168-173. (Immunogen: Flow cytometry)