Technical Data Sheet

PE-CF594 Mouse Anti-Human CD45RO

Product Information

Material Number:	562327	
rnate Name: CD45R; PTPRC; LCA; Leukocyte common antigen; GP180; LY5; 7		
Size:	25 tests	
Vol. per Test:	5 µl	
Clone:	UCHL1	
Immunogen:	Human IL-2-dependent T-cell line	
Isotype:	Mouse (BALB/c) IgG2a, κ	
Reactivity:	QC Testing: Human	
Workshop:	IV N31	
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.	
Storage Butter:	Aqueous buriered solution containing BSA and $\leq 0.09\%$ solution azide.	

Description

The UCHL1 monoclonal antibody specifically binds to the 180 kDa isoform of CD45 (aka, the Leukocyte Common Antigen). CD45RO is a type I transmembrane glycoprotein that has cytoplasmic protein tyrosine phosphatase activity and functions in signal transduction pathways. This CD45 isoform does not include amino acid sequences encoded by the variable CD45 exons A, B, or C. CD45RO is expressed on most thymocytes, activated T cells, memory T cells, granulocytes and monocytes, but only on a proportion of resting T cells. CD45RO and CD45RA antibodies seem to define complementary, predominantly non-overlapping, populations in resting peripheral T cells, demonstrating heterogeneity within the CD8 and CD4 subpopulations. CD45RO binds to CD22.

This antibody is conjugated to BD Horizon[™] PE-CF594, which has been developed exclusively by BD Biosciences as a better alternative to PE-Texas Red. PE-CF594 excites and emits at similar wavelengths to PE-Texas Red yet exhibits improved brightness and spectral characteristics. Due to PE having maximal absorption peaks at 496 nm and 564 nm, PE-CF594 can be excited by the blue (488-nm), green (532-nm) and yellow-green (561-nm) lasers and can be detected with the same filter set as PE-Texas Red (eg 610/20-nm filter).



Multicolor flow cytometric analysis of CD45RO expression on human peripheral blood lymphocytes. Human whole blood was stained with the BD Horizon™ PE-CF594 Mouse Anti-Human CD45RO antibody (Cat. No. 562299/562327; solid line histogram) and APC Mouse Anti-Human CD45RA antibody (Cat. No. 550855/561884). The erythrocytes were lysed with BD Pharm Lyse™ Lysing Buffer (Cat. No. 555899). The two color flow cytometric dot plots show the correlated expression of CD45RO versus CD45RA for 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 BD Horizon™ PE-CF594 under optimum conditions, and unconjugated antibody and free PE-CF594 were removed.

Application Notes

Application	l					
Flow cyto:	metry				Routinely Tested	
BD Biosci	ences					
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United States 877.232.8995	Canada 800.979.9408	Europe 32.53.720.550	Japan 0120.8555.90	Asia Pacific 65.6861.0633	Latin America/Caribbean 55.11.5185.9995	M B D
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Suggested Companion Products

Catalog Number	Name	Size	Clone
562306	PE-CF594 Mouse IgG2a, κ Isotype Control	0.1 mg	G155-178
554656	Stain Buffer (FBS)	500 ml	(none)
555899	Lysing Buffer	100 ml	(none)

Product Notices

- 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 1. sample (a test).
- 2. When excited by the yellow-green (561-nm) laser, the fluorescence may be brighter than when excited by the blue (488-nm) laser.
- Because of the broad absorption spectrum of the tandem fluorochrome, extra care must be taken when using multi-laser cytometers, which 3. may directly excite both PE and CF™594.
- 4. An isotype control should be used at the same concentration as the antibody of interest.
- 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. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/colors.
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- 9 Source of all serum proteins is from USDA inspected abattoirs located in the United States.
- 10 Caution: Sodium azide vields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
- 11. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

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Norton AJ, Ramsay AD, Smith SH, Beverley PC, Isaacson PG. Monoclonal antibody (UCHL1) that recognises normal and neoplastic T cells in routinely fixed tissues. J Clin Pathol. 1986; 39(4):399-405. (Clone-specific: Immunohistochemistry)

Smith SH, Brown MH, Rowe D, Callard RE, Beverley PC. Functional subsets of human helper-inducer cells defined by a new monoclonal antibody, UCHL1. Immunology. 1986; 58(1):63-70. (Clone-specific: Flow cytometry, Immunohistochemistry, Immunoprecipitation)

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