Technical Data Sheet

BV711 Mouse Anti-Human CD45RO

Product Information

Material Number:	563722
Alternate Name:	CD45R; PTPRC; LCA; Leukocyte common antigen; GP180; LY5; T200
Size:	100 tests
Vol. per Test:	5 μl
Clone:	UCHL1
Immunogen:	Human IL-2-dependent T-cell line
Isotype:	Mouse (BALB/c) IgG2a, ĸ
Reactivity:	QC Testing: Human
Workshop:	IV N31
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium 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.

The antibody was conjugated to BD Horizon[™] BV711 which is part of the BD Horizon[™] Brilliant Violet[™] family of dyes. This dye is a tandem fluorochrome of BD Horizon[™] BV421 with an Ex Max of 405-nm and an acceptor dye with an Em Max at 711-nm. BD Horizon[™] BV711 can be excited by the violet laser and detected in a filter used to detect CyTM5.5 / Alexa Fluor® 700-like dyes (eg, 712/20-nm filter). Due to the excitation and emission characteristics of the acceptor dye, there may be moderate spillover into the Alexa Fluor® 700 and PerCP-CyTM5.5 detectors. However, the spillover can be corrected through compensation as with any other dye combination.



Multicolor flow cytometric analysis of CD45RO expression on human peripheral blood lymphocytes. Left Panel: Human whole blood was stained with either BD Horizon™ BV711 Mouse Anti-Human CD45RO antibody (Cat. No. 563722/563723; solid line histogram), or BD Horizon™ BV711 Mouse IgG2a, κ Isotype Control (Cat. No. 563345; dashed line histogram).

Right Panel: Whole blood was stained with BD Horizon™ BV711 Mouse Anti-Human CD45RO and APC Mouse Anti-Human CD45RA (Cat. No. 550855/561884) antibodies.

Erythrocytes were lysed with BD FACS™ Lysing Solution (Cat. No. 349202). The fluorescence histograms and dot plot (CD45RO versus CD45RA expression) were derived from gated events with the forward and side light-scatter characteristics of intact lymphocytes. Flow cytometry was performed using a BD™ LSR II Flow Cytometer System.

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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 HorizonTM BV711 under optimum conditions, and unconjugated antibody and free BD HorizonTM

BV711 were removed. **Application Notes**

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Flow cytometry		Routinely Tested		
Suggested Companion Products				
Catalog Number	Name	Size	Clone	
554656	Stain Buffer (FBS)	500 ml	(none)	
563345	BV711 Mouse IgG2a, κ Isotype Control	50 µg	G155-178	
550855	APC Mouse Anti-Human CD45RA	100 tests	HI100	
561884	APC Mouse Anti-Human CD45RA	25 tests	HI100	
349202	BD FACS [™] Lysing Solution	100 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).
- An isotype control should be used at the same concentration as the antibody of interest. 2.
- Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before 3. 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.
- Alexa Fluor® is a registered trademark of Molecular Probes, Inc., Eugene, OR. 5.
- 6. Cy is a trademark of Amersham Biosciences Limited.
- Brilliant VioletTM 711 is a trademark of Sirigen. 7.
- 8. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
- 9 Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

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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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