Technical Data Sheet

V500 Mouse Anti-Human CD45RA

Product Information

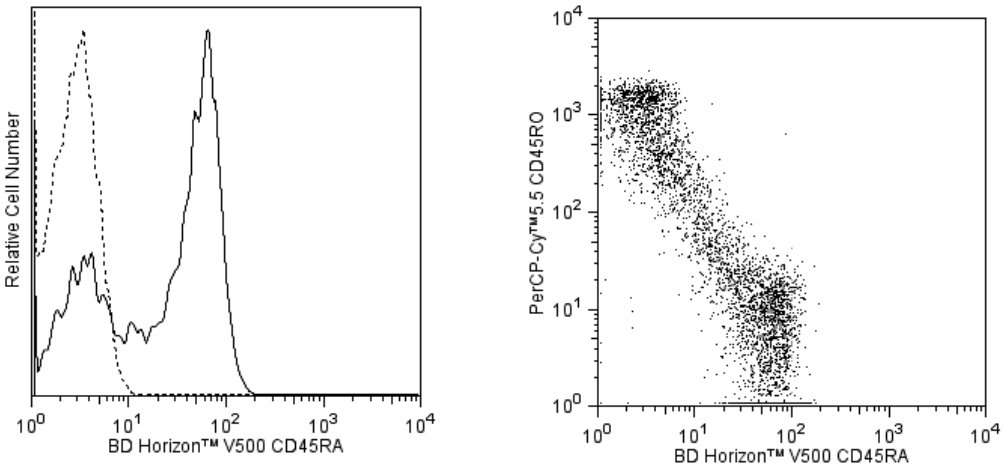
Material Number:	**561640**
Alternate Name:	CD45R; PTPRC; LCA; Leukocyte common antigen
Size:	50 tests
Vol. per Test:	5 µl
Clone:	HI100
Isotype:	Mouse IgG2b, κ
Reactivity:	QC Testing: Human
Workshop:	IV N906
Storage Buffer:	Aqueous buffered solution containing protein stabilizer, glycerol and ≤0.09% sodium azide.

Description

The HI100 monoclonal antibody specifically binds to the 220 kDa isoform of the human leukocyte common antigen found on approximately 40-50% of peripheral CD4+ T cells, 50% of peripheral CD8+ T cells and on a portion of B cells and monocytes. The CD45RA antigen is expressed by naïve and activated T cells. CD45RA antibodies are useful for the study of the suppressor/inducer subpopulation of CD4+ lymphocytes.

The antibody is conjugated to BD Horizon™ V500, which has been developed for use in multicolor flow cytometry experiments and is available exclusively from BD Biosciences. It is excited by the Violet laser with an Ex max of 415 nm and Em Max at 500 nm. BD Horizon V500 conjugates emit at a similar wavelength to Amcyan yet exhibit reduced spillover into the FITC channel. For more information on BD Horizon V500, visit bdbiosciences.com/colors.

When compensating dyes in this spectral range (such as Horizon™ V500 and AmCyan), the most accurate compensation can be obtained using single stained cellular controls. Due to spectral differences between cells and beads in this channel, using BD CompBeads can result in spillover errors for V500 and AmCyan reagents. Therefore, the use of BD CompBeads or BD CompBeads Plus to determine spillover values for these reagents is not recommended. Different V500 reagents (e.g. CD4 vs. CD45) can have slightly different fluorescence spillover therefore, it may also be necessary to use clone specific compensation controls when using these reagents.



Flow cytometric analysis of CD45RA expression on human peripheral blood lymphocytes. *Left Panel: Whole blood was stained with either BD Horizon™ V500 Mouse Anti-Human CD45RA antibody (Cat. No. 561640; solid line histogram) or with a BD Horizon™ V500 Mouse Ig2b, κ Isotype Control (Cat. No. 561629; dashed line histogram). Right Panel: Whole blood was stained with BD Horizon™ V500 Mouse Anti-Human CD45RA antibody in conjunction with a PerCP-Cy™5.5 Mouse Anti-Human CD45RO antibody (Cat. No. 560607).The erythrocytes were lysed with BD Pharm Lyse™ Lysing Buffer (Cat. No. 555899). The fluorescence histograms and the two-color dot blot showing the coexpressed levels of CD45RA and CD45RO were derived from events with the forward and side light-scatter characteristics of viable 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 Horizon™ V500 under optimum conditions, and unreacted BD Horizon™ V500 was removed.

Application Notes

Application

Flow cytometry	Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
561629	V500 Mouse IgG2b, κ Isotype Control	0.1 mg	27-35
555899	Lysing Buffer	100 ml	(none)
554656	Stain Buffer (FBS)	500 ml	(none)
560607	PerCP-Cy™5.5 Mouse Anti-Human CD45RO	50 tests	UCHL1

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. An isotype control should be used at the same concentration as the antibody of interest.
3. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
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 Fluorochrome Web Page at www.bdbiosciences.com/colors.
6. BD Horizon™ V500 has a maximum absorption of 415 nm and maximum emission of 500 nm. Before staining with this reagent, please confirm that your flow cytometer is capable of exciting the fluorochrome and discriminating the resulting fluorescence.

References

Barclay NA, Brown MH, Birkeland ML, et al, ed. *The Leukocyte Antigen FactsBook.* San Diego, CA: Academic Press; 1997. (Biology)

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Knapp W, Dorken B, Rieber EP, et al, ed. *Leucocyte Typing IV.* New York: Oxford University Press; 1989:1-1208. (Biology)

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