Technical Data Sheet

BV421 Mouse Anti-Human CD45RO

**Product Information**

**Material Number:** 562649  
**Alternate Name:** CD45R; PTPRC; LCA; Leukocyte common antigen; GP180; LY5; T200  
**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.

**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™ BV421 which is part of the BD Horizon™ Brilliant Violet™ family of dyes. With an Ex Max of 407-nm and Em Max at 421-nm, BD Horizon™ BV421 can be excited by the violet laser and detected in the standard Pacific Blue™ filter set (eg, 450/50-nm filter). BD Horizon™ BV421 conjugates are very bright, often exhibiting a 10 fold improvement in brightness compared to Pacific Blue™ conjugates.

**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™ BV421 under optimum conditions, and unconjugated antibody and free BD Horizon™ BV421 were removed.

**Multicolor flow cytometric analysis of CD45RO expression on human peripheral blood lymphocytes.**

Left Panel: Whole blood was stained with BD Horizon™ BV421 Mouse Anti-Human CD45RO antibody (Cat. No. 562641/562649; solid line histogram), or with a BD Horizon™ BV421 Mouse IgG2a, κ Isotype Control (Cat. No. 562439; dashed line histogram).

Right Panel: Whole blood was stained with BD Horizon™ BV421 Mouse Anti-Human CD45RO antibody in conjunction with a PE Mouse Anti-Human CD45RA antibody (Cat. No. 555489). Erythrocytes were lysed with BD Pharm Lyse™ Lysing Buffer (Cat. No.555899). The fluorescence histograms and dot plot (CD45RO versus CD45RA expression) 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.

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### Application Notes

#### Flow cytometry Routinely Tested

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<th>Catalog Number</th>
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<tbody>
<tr>
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<td>BV421 Mouse Anti-Human CD45RO</td>
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<td>UCHL1</td>
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#### Suggested Companion Products

### Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use $1 \times 10^6$ 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.
5. 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.
6. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
7. Pacific Blue™ is a trademark of Molecular Probes, Inc., Eugene, OR.
8. Brilliant Violet™ 421 is a trademark of Sirigen.

### References