

## Technical Data Sheet

## PE-CF594 Mouse Anti-Human CD45RA

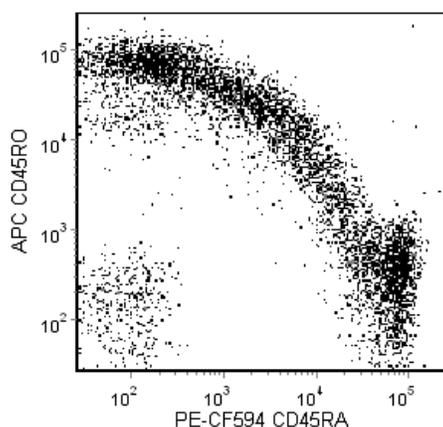
## Product Information

|                         |   |
|-------------------------|---|
| <b>Material Number:</b> | 562326  |
| <b>Alternate Name:</b>  | CD45R; PTPRC; LCA; Leukocyte common antigen                       |
| <b>Size:</b>            | 25 tests  |
| <b>Vol. per Test:</b>   | 5 µl  |
| <b>Clone:</b>           | HI100   |
| <b>Isotype:</b>         | Mouse IgG2b, κ  |
| <b>Reactivity:</b>      | QC Testing: Human   |
| <b>Workshop:</b>        | IV N906   |
| <b>Storage Buffer:</b>  | Aqueous buffered solution containing BSA and ≤0.09% sodium azide. |

## Description

The HI100 monoclonal antibody specifically binds to the 220 kDa isoform of the human leukocyte common antigen, CD45RA. CD45RA is expressed 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-specific antibodies are useful for the study of the suppressor/inducer subpopulation of CD4+ lymphocytes.

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 CD45RA expression on human peripheral blood lymphocytes.**  
Human whole blood was stained with the BD Horizon™ PE-CF594 Mouse Anti-Human CD45RA antibody (Cat. No. 562298/562326) and APC Mouse Anti-Human CD45RO antibody (Cat. No. 559865/560899). 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 CD45RA versus CD45RO 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

|                |                  |
|----------------|------------------|
| Flow cytometry | Routinely Tested |
|----------------|------------------|

## Suggested Companion Products

| Catalog Number | Name                                    | Size      | Clone  |
|----------------|---|-----------|--------|
| 562305         | PE-CF594 Mouse IgG2b, κ Isotype Control | 0.1 mg    | 27-35  |
| 554656         | Stain Buffer (FBS)                      | 500 ml    | (none) |
| 555899         | Lysing Buffer                           | 100 ml    | (none) |
| 559865         | APC Mouse Anti-Human CD45RO             | 100 tests | UCHL1  |

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| United States | Canada       | Europe        | Japan        | Asia Pacific | Latin America/Caribbean |
| 877.232.8995  | 800.979.9408 | 32.53.720.550 | 0120.8555.90 | 65.6861.0633 | 55.11.5185.9995         |

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## Product Notices

1. Please refer to [www.bdbiosciences.com/pharming/protocols](http://www.bdbiosciences.com/pharming/protocols) for technical protocols.
2. 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- $\mu$ l experimental sample (a test).
3. An isotype control should be used at the same concentration as the antibody of interest.
4. When excited by the yellow-green (561-nm) laser, the fluorescence may be brighter than when excited by the blue (488-nm) laser.
5. Because of the broad absorption spectrum of the tandem fluorochrome, extra care must be taken when using multi-laser cytometers, which may directly excite both PE and CF<sup>TM</sup>594.
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](http://www.bdbiosciences.com/colors).
8. CF<sup>TM</sup> is a trademark of Biotium, Inc.
9. Texas Red is a registered trademark of Molecular Probes, Inc., Eugene, OR.
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11. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
12. 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.

## References

Knapp W, Dörken B, Gilks WR, et al, ed. *Leucocyte Typing IV*. New York, NY: Oxford University Press; 1989:1-1182. (Clone-specific)

Zola H, Swart B, Nicholson I, Voss E. *Leukocyte and Stromal Cell Molecules. The CD Markers*. Hoboken, New Jersey: John Wiley & Sons, Inc.; 2007:1-581. (Biology)

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