

CD45RO (UCHL-1)

Form	Catalog number
PE	347967
PE-Cy7	337168
APC	340438

Product availability varies by region. Contact BD Biosciences Customer Support or your local sales representative for information.

RESEARCH APPLICATIONS

Research applications include studies of:

- Memory T-cell subsets¹⁻⁶
- T-cell differentiation in HIV⁷
- T-cell differentiation in other infectious diseases⁸
- Normal and abnormal promyelocyte distinction⁹

DESCRIPTION

Specificity

The CD45RO antibody, a member of the CD45 family that includes CD45, CD45RA, and CD45RB, recognizes a 180-kilodalton (kDa) isoform of the leucocyte common antigen (LCA).¹⁻⁵ The CD45 antigen is a protein tyrosine phosphatase.¹⁰

Antigen distribution

In peripheral blood, the CD45RO antigen is present on approximately 40% of resting peripheral blood T lymphocytes, including the CD4⁺ and CD8⁺ subpopulations, as well as on most thymocytes and activated T lymphocytes.^{1,2} It is also expressed on monocytes, macrophages, and granulocytes.^{1,2} The CD45RO antigen is present at low density early in the T-lymphocyte maturation cycle. Upon activation by phytohemagglutinin (PHA) or alloantigen, naive T lymphocytes first acquire CD45RO and then lose CD45RA.^{2,3,6} When these activated T lymphocytes are rechallenged, the cells that exhibit a secondary response are primarily CD45RO⁺, leading to the concept that CD45RO⁺ cells are a primed population of memory T lymphocytes.^{2,3,6}

Clone

The CD45RO antibody, clone UCHL-1, is derived from hybridization of P3/NS-1/1-Ag4-1 mouse myeloma cells with spleen cells from BALB/c mice immunized with an interleukin-2 (IL-2)-dependent human T-cell line.¹

Composition

The CD45RO antibody is composed of mouse IgG_{2a} heavy chains and kappa light chains.

Product configuration

The following are supplied in phosphate buffered saline (PBS) containing a stabilizer and a preservative.

Form	Number of tests	Volume per test (μL) ^a	Amount provided (μg)	Total volume (mL)	Concentration (μg/mL)	Stabilizer	Preservative
PE	100	20	12.5	2.0	6.25	Gelatin	0.1% Sodium azide
PE-Cy TM 7	100	5	25	0.5	50	Gelatin	0.1% Sodium azide
APC	100	5	25	0.5	50	Gelatin	0.1% Sodium azide

a. Volume required to stain 10⁶ cells.

For Research Use Only. Not for use in diagnostic or therapeutic procedures.

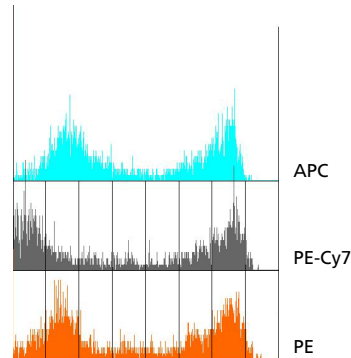
CAUTION Some PE-Cy7 conjugates show changes in their emission spectra with prolonged exposure to paraformaldehyde or light. For overnight storage of stained cells, wash and resuspend in buffer without paraformaldehyde after 1 hour of fixation.

PROCEDURE

Visit our website (bdbiosciences.com) or contact your local BD representative for the lyse/wash method for direct immunofluorescence.

REPRESENTATIVE DATA

Flow cytometric analysis was performed on peripheral blood and gated on lymphocytes. Laser excitation was at 488 nm and 635 nm. Representative data analyzed with a BD FACS™ brand flow cytometer is shown in the following figure.



HANDLING AND STORAGE

Store vials at 2°C–8°C. Conjugated forms should not be frozen. Protect from exposure to light. Each reagent is stable until the expiration date shown on the bottle label when stored as directed.

WARNING

All biological specimens and materials coming in contact with them are considered biohazards. Handle as if capable of transmitting infection^{11,12} and dispose of with proper precautions in accordance with federal, state, and local regulations. Never pipette by mouth. Wear suitable protective clothing, eyewear, and gloves.

CHARACTERIZATION

To ensure consistently high-quality reagents, each lot of antibody is tested for conformance with characteristics of a standard reagent. Representative flow cytometric data is included in this data sheet.

WARRANTY

Unless otherwise indicated in any applicable BD general conditions of sale for non-US customers, the following warranty applies to the purchase of these products.

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