Product Description

The UCHL1 antibody reacts with an extracellular epitope on CD45RO, the shortest isoform of CD45, a type I transmembrane glycoprotein and member of the protein tyrosine phosphatase family (receptor class 1/6 subfamily). Alternative splicing of exons 4, 5 and 6 that encode the extracellular RA, RB and RC polypeptides of CD45 gives rise to up to 8 isoforms with molecular masses of 180 - 240 kDa. Excision of all three exons generates the ~180-kDa CD45RO isoform, which is expressed on activated and memory (but not naïve) T cells, some B cell subsets, activated monocytes and macrophages, and granulocytes. CD45RO enhances both T cell receptor- and B cell receptor-mediated activation and is a known ligand for CD22 on B cells. The UCHL1 antibody has been employed to identify T-cell lymphomas and leukemia and is commonly used in combination with antibodies against CD45RA to discern memory and naïve T cells. The proportion of CD45RO+ (memory) T cells typically increases with age. The UCHL1 epitope is destroyed by treatment with neuraminidase or O-glycosidase.

Target Antigen Name: CD45RO
Alternative Names: B220, CD45, GP180, LCA, L-CA, LY5, T200, Protein tyrosine phosphatase receptor type C, PTPRC
Gene ID: 5788
Species Reactivity: Human, Chimpanzee, Common Marmoset; reportedly cross-reacts to varying extents with Cow, Dog, Mouse, Rat, some macaques (Pig-tailed, Rhesus)
Host Species: Mouse (BALB/c)
Clonality: Monoclonal
Clone: UCHL1
Isotype: IgG2a, kappa
Immunogen: Human IL-2-dependent T-cell line CA1
Conjugate: APC

Applications

Verified: FC
Reported: FC
Special Applications: This antibody clone has been verified for purity assessments of cells isolated with EasySep™ kits, including EasySep™ Human Memory CD4+ T Cell Enrichment Kit (Catalog #19157) and EasySep™ Human Memory CD8+ T Cell Enrichment Kit (Catalog #19159).

Abbreviations: CellSep: Cell separation; ChIP: Chromatin immunoprecipitation; FA: Functional assay; FC: Flow cytometry; ICC: Immunocytochemistry; IF: Immunofluorescence microscopy; IHC: Immunohistochemistry; IP: Immunoprecipitation; WB: Western blotting

Properties

Formulation: Aqueous buffer containing 0.09% sodium azide, may contain carrier protein/stabilizer
Purification: The antibody was purified by affinity chromatography and conjugated with APC under optimal conditions. The solution is free of unconjugated APC and unconjugated antibody.
Stability and Storage: Product stable at 2 - 8°C when stored undiluted. Do not freeze. Protect product from prolonged exposure to light. For product expiry date, please contact techsupport@stemcell.com.
Directions for Use: For flow cytometry the suggested use of this antibody is ≤ 5 μL per 1 x 10e6 cells in 100 μL volume or per 100 μL of whole blood. It is recommended that the antibody be titrated for optimal performance for each application.
**Data**

(A) Flow cytometry analysis of human peripheral blood mononuclear cells (PBMCs) labeled with Anti-Human CD45RO Antibody, Clone UCHL1, APC (filled histogram) or a mouse IgG2a, kappa isotype control antibody, APC (open histogram).

(B) Flow cytometry analysis of human PBMCs labeled with Anti-Human CD45RO Antibody, Clone UCHL1, APC and an anti-human CD45RA antibody, FITC. Cells were gated on CD3+ cells (T lymphocytes).

(C) Flow cytometry analysis of human PBMCs labeled with a mouse IgG2a, kappa isotype control antibody, APC and an anti-human CD45RA antibody, FITC. Cells were gated on CD3+ cells (T lymphocytes).

**Related Products**

For a complete list of antibodies, including other conjugates, sizes and clones, as well as related products available from STEMCELL Technologies, please visit our website at www.stemcell.com/antibodies or contact us at techsupport@stemcell.com.

**References**


STEMCELL TECHNOLOGIES INC.'S QUALITY MANAGEMENT SYSTEM IS CERTIFIED TO ISO 13485 MEDICAL DEVICE STANDARDS.