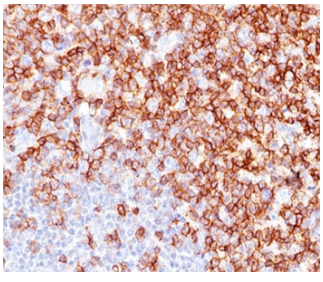
CD45RO Antibody UCHL-1 / Memory T Cell Marker [clone UCHL-1] (V2237)

Catalog No.	Formulation	Size
V2237-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V2237-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V2237SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V2237IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

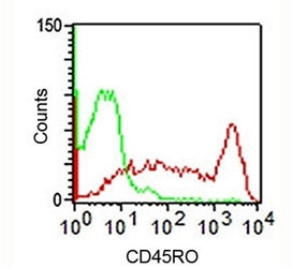
Citations (12)

Bulk quote request

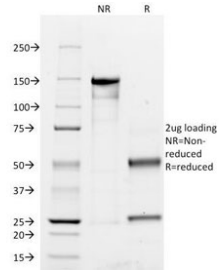
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2a, kappa
Clone Name	UCHL-1
Purity	Protein G affinity chromatography
Buffer	1X PBS, pH 7.4
Gene ID	5788
Localization	Cell surface
Applications	Flow cytometry: 1-2ug/10^6 cells Immunofluorescence: 1-2ug/ml Immunohistochemistry (FFPE): 0.25-0.5ug/ml for 30 min at RT
Limitations	This CD45RO Antibody UCHL-1 / Memory T Cell Marker is available for research use only.



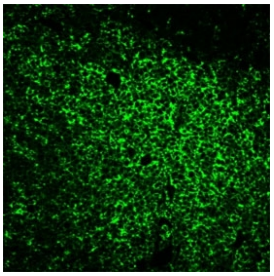
CD45RO Antibody UCHL-1 Human Tonsil Memory T Cells IHC. Immunohistochemistry of human tonsil tissue using CD45RO Antibody UCHL-1 / Memory T Cell Marker shows strong HRP-DAB brown staining of lymphoid cells, with prominent membrane-associated staining consistent with CD45RO expression. The distribution of positive cells highlights CD45RO-expressing lymphocyte populations within the tonsil. This CD45RO Antibody supports detection of the memory T cell-associated PTPRC isoform in human lymphoid tissue.



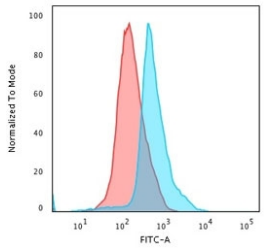
CD45RO Antibody UCHL-1 Human Lymphocyte FACS. Flow cytometry of human lymphocytes using CD45RO Antibody UCHL-1 / Memory T Cell Marker shows a distinct CD45RO-positive population relative to the isotype control. The histogram shows CD45RO Antibody staining (red) and isotype control staining (green). This CD45RO Antibody demonstrates detection of the memory T cell-associated PTPRC isoform in human lymphocytes.



SDS-PAGE Analysis of Purified, BSA-Free CD45RO Antibody (clone UCHL-1). Confirmation of Integrity and Purity of the Antibody.



CD45RO Antibody UCHL-1 Human Tonsil Memory T Cell IF. Immunofluorescence staining of FFPE human tonsil tissue using CD45RO Antibody UCHL-1 / Memory T Cell Marker shows green fluorescence distributed throughout lymphocyte-rich regions, highlighting CD45RO-positive cells within the tissue. This CD45RO Antibody demonstrates localization of the memory T cell-associated PTPRC isoform in human tonsil.



CD45RO Antibody UCHL-1 Human Jurkat T Cell Leukemia FACS. Flow cytometry of PFA-fixed human Jurkat T cell leukemia cells using CD45RO Antibody UCHL-1 / Memory T Cell Marker. The histogram shows isotype control staining (red) and CD45RO Antibody staining (blue). The rightward fluorescence shift demonstrates detection of CD45RO on human Jurkat cells, supporting analysis of this PTPRC isoform by flow cytometry.

Description

CD45RO Antibody UCHL-1 / Memory T Cell Marker recognizes CD45RO, a low molecular weight isoform of the leukocyte common antigen CD45 encoded by the PTPRC gene. CD45 is a transmembrane protein tyrosine phosphatase broadly expressed across nucleated hematopoietic cells, while alternative splicing of its extracellular region generates distinct isoforms associated with different leukocyte populations and differentiation states. CD45RO is widely used in immune cell phenotyping and is particularly associated with memory and activated T cell populations.

PTPRC encodes a receptor-type protein tyrosine phosphatase composed of an extracellular region, a single transmembrane domain and intracellular phosphatase domains. CD45 regulates Src family kinases and other components of antigen receptor signaling pathways and plays an important role in signaling through the T cell and B cell receptors. Through these activities, CD45 contributes to lymphocyte activation, differentiation, survival and immune responsiveness. Alternative splicing of the extracellular portion of PTPRC produces the major CD45 isoforms used to characterize lymphocyte differentiation.

CD45RO represents a shorter CD45 isoform that lacks the alternatively encoded A, B and C extracellular exons. Its expression is commonly associated with antigen-experienced memory T cells and activated T cell populations. In

contrast, naive T cells commonly express CD45RA, making comparison of CD45RO and CD45RA useful for studying changes in T cell phenotype associated with antigen exposure and differentiation. CD45RO expression is not exclusive to memory T cells, however, and is best interpreted together with additional lineage and differentiation markers.

A CD45RO Antibody is widely used in immunology, hematology and cancer research involving memory T cells, lymphocyte activation and immune cell phenotyping. CD45RO-positive lymphocytes are studied in peripheral blood and lymphoid tissues as well as within inflammatory and tumor microenvironments. Analysis of CD45RO can contribute to studies of adaptive immune responses, T cell differentiation and the distribution of antigen-experienced lymphocyte populations. Its relationship with other PTPRC isoforms also makes CD45RO valuable for investigating changes in CD45 expression during lymphocyte maturation and activation.

Clone UCHL-1 is a mouse monoclonal antibody directed against human CD45RO and is a widely established clone with extensive use in published research. Its substantial publication history makes UCHL-1 a well-recognized reagent for studies of CD45RO expression, T cell differentiation and immune cell populations. A CD45RO Antibody provides a useful reagent for investigating memory T cells, lymphocyte activation and PTPRC isoform biology.

CD45RO is widely studied as a memory T cell and lymphocyte differentiation marker, connecting this PTPRC isoform with other immune cell surface targets available on our CD Antibodies page.

Application Notes

The concentration stated for each application is a general starting point. Variations in protocols, secondaries and substrates may require the CD45RO Antibody UCHL-1 / Memory T Cell Marker to be titered up or down for optimal performance.

1. Staining of formalin-fixed tissues requires boiling tissue sections in 10mM Citrate Buffer, pH 6.0, for 10-20 min followed by cooling at RT for 20 minutes.
2. The prediluted format is supplied in a dropper bottle and is optimized for use in IHC. After epitope retrieval step (if required), drip mAb solution onto the tissue section and incubate at RT for 30 min.

Immunogen

Cultured human T-cells from an IL-2-dependent T-cell line (CA1) were used as the immunogen for the CD45RO antibody.

Storage

Store the CD45RO antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

CD45RO antibody, PTPRC antibody, CD45 antibody, CD45R antibody, Leukocyte common antigen antibody, LCA antibody, T200 antibody, Memory T cell marker antibody

References (2)

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