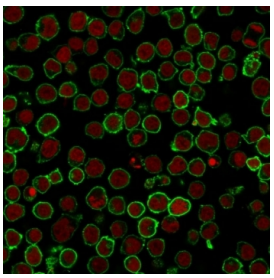
CD45RO Antibody 190-2F2.5 / Activated T Cell Marker [clone 190-2F2.5] (V2416)

Catalog No.	Formulation	Size
V2416-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V2416-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V2416SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

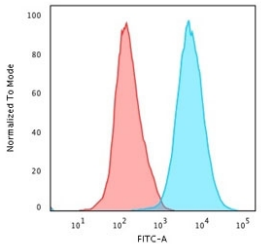
Citations (3)

Bulk quote request

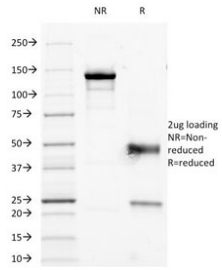
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2a, kappa
Clone Name	190-2F2.5
Purity	Protein G affinity chromatography
Buffer	1X PBS, pH 7.4
UniProt	P08575
Localization	Cell surface
Applications	Flow cytometry: 1-2ug/10^6 cells Immunofluorescence: 1-2ug/ml
Limitations	This CD45RO Antibody 190-2F2.5 / Activated T Cell Marker is available for research use only.



CD45RO Antibody 190-2F2.5 Human Jurkat T Cell Leukemia IF. Immunofluorescence staining of PFA-fixed human Jurkat T cell leukemia cells using CD45RO Antibody 190-2F2.5 / Activated T Cell Marker shows prominent green fluorescence outlining the cell surface, consistent with membrane-associated CD45RO expression. Nuclei were counterstained with Reddot nuclear stain (red). This CD45RO Antibody demonstrates detection of the activated T cell-associated PTPRC isoform in human T cells.



CD45RO Antibody 190-2F2.5 Human Jurkat T Cell Leukemia FACS. Flow cytometry of PFA-fixed human Jurkat T cell leukemia cells using CD45RO Antibody 190-2F2.5 / Activated T Cell Marker. The histogram shows isotype control staining (red) and CD45RO Antibody staining (blue). The strong rightward fluorescence shift demonstrates detection of CD45RO on human Jurkat cells, supporting analysis of this PTPRC isoform by flow cytometry.



SDS-PAGE Analysis of Purified, BSA-Free CD45RO Antibody (clone 190-2F2.5). Confirmation of Integrity and Purity of the Antibody.

Description

CD45RO Antibody 190-2F2.5 / Activated 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. Alternative splicing of its extracellular region generates distinct CD45 isoforms with characteristic expression patterns among leukocyte populations and differentiation states. CD45RO is commonly associated with activated and antigen-experienced T cells, making it an important marker for studies of lymphocyte activation and differentiation.

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, contributing to signaling through the T cell and B cell receptors. Through these activities, CD45 influences lymphocyte activation, differentiation, survival and immune responsiveness. Alternative splicing within the extracellular portion of PTPRC generates the major CD45 isoforms used for immune cell phenotyping.

CD45RO represents a shorter CD45 isoform that lacks the alternatively encoded A, B and C extracellular exons. Expression of CD45RO is frequently associated with antigen-experienced memory T cells and activated T cell populations. In contrast, naive T cells commonly express CD45RA, and changes between CD45RA- and CD45RO-associated phenotypes are widely investigated during T cell differentiation and immune activation. CD45RO is not exclusive to activated T cells, so its expression is typically interpreted together with other lineage, activation and differentiation markers.

A CD45RO Antibody can support research in immunology, hematology, inflammation and cancer biology involving activated T cells, lymphocyte differentiation and immune cell phenotyping. CD45RO-positive lymphocytes are studied in peripheral blood, lymphoid tissues and immune cell infiltrates within inflammatory and tumor microenvironments. Analysis of this PTPRC isoform can also complement CD45RA and CD45RB detection when investigating changes in lymphocyte phenotype associated with immune responses.

Clone 190-2F2.5 is a mouse monoclonal antibody directed against human CD45RO. Its clone-specific recognition provides a reagent for examining CD45RO expression in lymphocyte and hematopoietic cell populations. A CD45RO Antibody provides a useful tool for investigating activated T cells, lymphocyte differentiation and PTPRC isoform biology.

CD45RO is a PTPRC isoform widely associated with memory T cells and lymphocyte differentiation; learn more about this target and related reagents on our CD45RO Antibody page.

Application Notes

Due to variation in protocol and secondary antibody used, the CD45RO Antibody 190-2F2.5 / Activated T Cell Marker may need to be titered for optimal performance.

Immunogen

Lentillectin purified glycoproteins obtained from HuPBL and from a CLL (B cell) were used as immunogen for this CD45RO antibody.

Storage

The CD45RO antibody (with azide) can be stored at 2-8oC. The azide-free format should be aliquoted and stored at -20oC or colder.

Alternate Names

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

References (1)

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