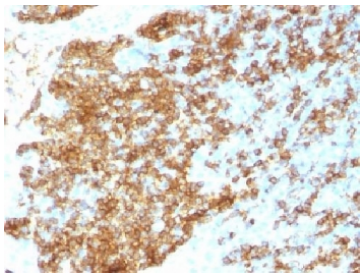
CD45RB Antibody PTPRC/1783R / T Cell Differentiation Marker [clone PTPRC/1783R] (V3475)

Catalog No.	Formulation	Size
V3475-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V3475-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V3475SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V3475IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

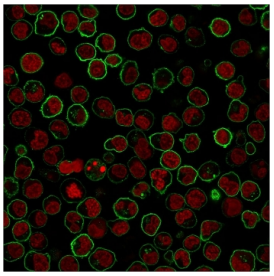
Recombinant RABBIT MONOCLONAL

Bulk quote request

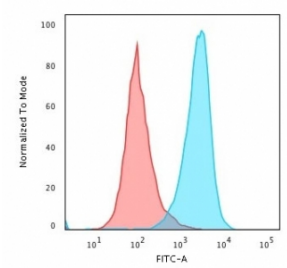
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG, kappa
Clone Name	PTPRC/1783R
Purity	Protein A affinity chromatography
UniProt	P08575
Localization	Cell surface and cytoplasmic
Applications	Flow cytometry: 1-2ug/10^6 cells Immunofluorescence: 1-2ug/ml Western blot: 1-2ug/ml Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RT
Limitations	This CD45RB Antibody PTPRC/1783R / T Cell Differentiation Marker is available for research use only.



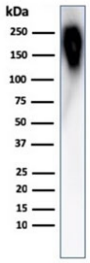
CD45RB Antibody PTPRC/1783R Human Tonsil IHC. Immunohistochemistry of FFPE human tonsil tissue using CD45RB Antibody PTPRC/1783R / T Cell Differentiation Marker shows HRP-DAB brown staining of lymphoid cells, consistent with CD45RB expression in human lymphoid tissue. Heat-induced epitope retrieval was performed by boiling tissue sections in 10 mM citrate buffer, pH 6, for 10-20 min followed by cooling at RT for 20 min. This recombinant CD45RB Antibody supports detection of the PTPRC isoform in human tonsil.



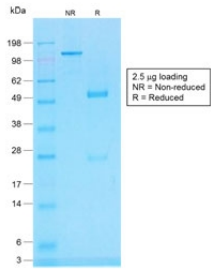
CD45RB Antibody PTPRC/1783R Human Raji B Cell Lymphoma IF. Immunofluorescence staining of PFA-fixed human Raji B cell lymphoma cells using CD45RB Antibody PTPRC/1783R / T Cell Differentiation Marker shows prominent green fluorescence outlining the cell surface, consistent with membrane-associated CD45RB expression. Phalloidin staining is shown in red to visualize filamentous actin and cellular morphology. This recombinant CD45RB Antibody demonstrates detection of the PTPRC isoform in human B cells.



CD45RB Antibody PTPRC/1783R Human Raji B Cell Lymphoma FACS. Flow cytometry of PFA-fixed human Raji B cell lymphoma cells using CD45RB Antibody PTPRC/1783R / T Cell Differentiation Marker. The histogram shows isotype control staining (red) and CD45RB Antibody staining (blue). The strong rightward fluorescence shift demonstrates detection of CD45RB on human Raji cells, supporting analysis of this PTPRC isoform by flow cytometry.



CD45RB Antibody PTPRC/1783R Human Spleen WB. Western blot analysis of human spleen lysate using CD45RB Antibody PTPRC/1783R / T Cell Differentiation Marker shows broad immunoreactivity within the expected molecular weight range of approximately 147-220 kDa. The variable apparent molecular weight is consistent with the extensive glycosylation of CD45/PTPRC isoforms. This recombinant CD45RB Antibody demonstrates detection of the CD45RB isoform in human spleen tissue.



SDS-PAGE analysis of purified, BSA-free recombinant CD45RB antibody (clone PTPRC/1783R) as confirmation of integrity and purity.

Description

CD45RB Antibody PTPRC/1783R / T Cell Differentiation Marker recognizes CD45RB, an alternatively spliced form 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 within its extracellular region generates distinct CD45 isoforms with characteristic expression patterns among leukocyte populations, making CD45RB an important target for studies of lymphocyte phenotype, activation and differentiation.

PTPRC encodes a receptor-type protein tyrosine phosphatase consisting 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, including signaling downstream of the T cell and B cell receptors. Through these functions, CD45 contributes to lymphocyte activation, differentiation, survival and immune responsiveness. Variation in its extracellular region provides the molecular basis for several commonly studied CD45 isoforms.

CD45RB refers to CD45 forms containing the alternatively encoded B exon within the extracellular domain. Expression levels and patterns of CD45RB vary among lymphocyte populations and can change with cellular differentiation and activation. CD45RB has therefore been widely studied in T cell biology and immune cell phenotyping, often in combination with additional cell-surface markers to characterize lymphocyte populations. Unlike CD45RA and CD45RO, which are frequently associated with particular naive and memory T cell phenotypes, respectively, CD45RB provides a complementary marker for examining changes in PTPRC isoform expression during lymphocyte differentiation.

A CD45RB Antibody can support research in immunology, hematology and inflammation involving T cell differentiation, lymphocyte activation and immune cell phenotyping. CD45RB expression has also been investigated in studies of immune regulation and hematopoietic cell populations. Because CD45 isoform expression varies according to cell type and differentiation state, analysis of CD45RB alongside other PTPRC isoforms and lineage markers can provide additional information about immune cell phenotype.

Clone PTPRC/1783R is a recombinant rabbit monoclonal antibody directed against human CD45RB and has been used in published research. Its recombinant monoclonal format provides a defined antibody sequence for consistent target recognition across production lots. A CD45RB Antibody provides a useful reagent for investigating T cell differentiation, lymphocyte phenotyping and CD45/PTPRC isoform biology.

CD45RB is an important lymphocyte differentiation marker, connecting this PTPRC isoform with other immune cell surface targets available on our CD Antibodies page.

Application Notes

Due to variation in protocol and secondary antibody used, the CD45RB Antibody PTPRC/1783R / T Cell Differentiation Marker may need to be titered for optimal performance.

1. 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

Human B lymphocytes were used as immunogen for this recombinant CD45RB antibody.

Storage

The recombinant CD45RB antibody (with azide) can be stored at 2-8oC. The azide-free format should be aliquoted and stored at -20oC or colder.

Alternate Names

CD45RB antibody, PTPRC antibody, CD45 antibody, CD45R antibody, Leukocyte common antigen antibody, LCA antibody, Protein tyrosine phosphatase receptor type C antibody

References (2)

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