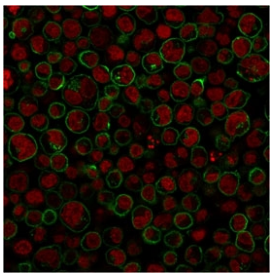
CD45RA Antibody 111-1C5 / Naive T Cell Marker [clone 111-1C5] (V2409)

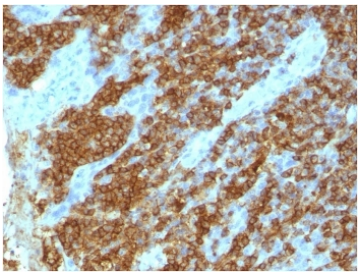
Catalog No.	Formulation	Size
V2409-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V2409-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V2409SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V2409IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

Bulk quote request

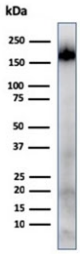
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	111-1C5
Purity	Protein G affinity chromatography
Buffer	1X PBS, pH 7.4
UniProt	P08575
Localization	Cell surface
Applications	Flow cytometry: 1-2ug/10^6 cells Immunofluorescence: 1-2ug/ml Western blot: 1-2ug/ml Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RT
Limitations	This CD45RA Antibody 111-1C5 / Naive T Cell Marker is available for research use only.



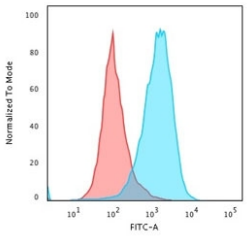
CD45RA Antibody 111-1C5 Human Raji B Cell Lymphoma IF. Immunofluorescence staining of PFA-fixed human Raji B cell lymphoma cells using CD45RA Antibody 111-1C5 / Naive T Cell Marker shows prominent green fluorescence outlining the cell surface, consistent with membrane-associated CD45RA expression. Nuclei were counterstained with Reddot nuclear stain (red). This CD45RA Antibody demonstrates detection of the PTPRC isoform in human B cells.



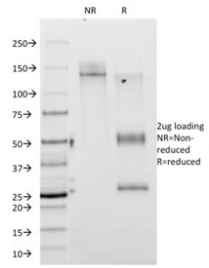
CD45RA Antibody 111-1C5 Human Tonsil IHC. Immunohistochemistry of FFPE human tonsil tissue using CD45RA Antibody 111-1C5 / Naive T Cell Marker shows strong HRP-DAB brown staining of lymphoid cells, with prominent membrane-associated staining consistent with CD45RA expression. Heat-induced epitope retrieval was performed by boiling tissue sections in 10 mM Tris with 1 mM EDTA, pH 9, for 20 min followed by cooling prior to staining. This CD45RA Antibody highlights PTPRC isoform expression within human lymphoid tissue.



CD45RA Antibody 111-1C5 Human Spleen WB. Western blot analysis of human spleen tissue lysate using CD45RA Antibody 111-1C5 / Naive T Cell Marker shows a prominent immunoreactive band within the expected molecular weight range of approximately 147-220 kDa. The apparent molecular weight of CD45RA can vary due to extensive glycosylation of the extracellular domain. This CD45RA Antibody demonstrates detection of the PTPRC isoform in human spleen tissue.



CD45RA Antibody 111-1C5 Human Raji B Cell Lymphoma FACS. Flow cytometry of PFA-fixed human Raji B cell lymphoma cells using CD45RA Antibody 111-1C5 / Naive T Cell Marker. The histogram shows isotype control staining (red) and CD45RA Antibody staining (blue). The clear rightward fluorescence shift demonstrates detection of CD45RA on human Raji cells, supporting analysis of this PTPRC isoform by flow cytometry.



SDS-PAGE analysis of purified, BSA-free CD45RA antibody (clone 111-1C5) as confirmation of integrity and purity.

Description

CD45RA Antibody 111-1C5 / Naive T Cell Marker recognizes CD45RA, 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, while alternative splicing of its extracellular region generates distinct isoforms with characteristic expression patterns among leukocyte populations. CD45RA is widely studied in immune cell phenotyping and is particularly useful as a marker associated with naive T cell populations.

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, contributing to signaling through the T cell and B cell receptors. Through these functions, CD45 influences lymphocyte activation, differentiation, survival and immune responsiveness. Alternative splicing within the extracellular portion of PTPRC provides the molecular basis for the major CD45 isoforms used to characterize lymphocyte populations.

CD45RA refers to higher molecular weight CD45 isoforms containing the alternatively encoded A exon within the extracellular domain. CD45RA expression is commonly associated with naive T cells and is frequently evaluated alongside CD45RO and other markers to distinguish lymphocyte differentiation states. Naive T cells typically exhibit a CD45RA-positive phenotype, whereas many antigen-experienced memory T cells express CD45RO. CD45RA is not exclusive to naive T cells, however, and its expression should be interpreted together with additional phenotypic markers and the specific leukocyte population under investigation.

A CD45RA Antibody is useful for research involving T cell maturation, lymphocyte differentiation and immune cell phenotyping. CD45RA expression is studied in the characterization of naive and differentiated T cell populations and in investigations of immune activation, aging, infection and disease. Comparison of CD45RA with other PTPRC isoforms can also provide insight into changes in leukocyte phenotype associated with differentiation and immune responses.

Clone 111-1C5 is a mouse monoclonal antibody directed against human CD45RA and has been used in published research. Its established clone identity and recognition of the CD45RA form of PTPRC support studies of lymphocyte phenotype and CD45 isoform expression. A CD45RA Antibody provides a useful reagent for investigating naive T cell populations, lymphocyte differentiation and immune cell phenotyping.

CD45RA is widely studied as a T cell 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 CD45RA Antibody 111-1C5 / Naive T Cell 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

Stimulated human leukocytes were used as immunogen for this CD45RA antibody.

Storage

The CD45RA antibody (with azide) can be stored at 2-8oC. The azide-free format should be aliquoted and stored at -20oC or colder.

Alternate Names

CD45RA antibody, PTPRC antibody, CD45 antibody, CD45R antibody, Leukocyte common antigen antibody, LCA antibody, Protein tyrosine phosphatase receptor type C antibody

References (2)

Copyright © NSJ Bioreagents. All rights reserved.