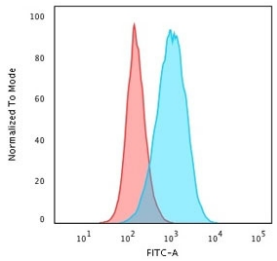
CD45RB Antibody BRA-11 / B Cell Marker [clone BRA-11] (V2245)

Catalog No.	Formulation	Size
V2245-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V2245-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V2245SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V2245IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

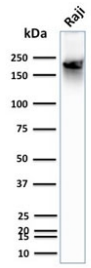
Citations (3)

Bulk quote request

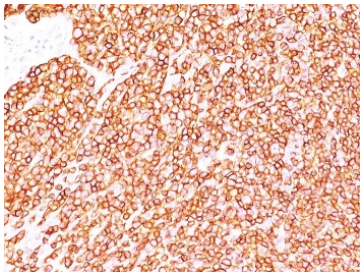
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	BRA-11
Purity	Protein G affinity chromatography
Buffer	1X PBS, pH 7.4
Gene ID	5788
Localization	Cell surface and cytoplasmic
Applications	Flow cytometry: 1-2ug/10^6 cells Immunofluorescence: 1-3ug/ml Western blot: 2-4ug/ml Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RT
Limitations	This CD45RB Antibody BRA-11 / B Cell Marker is available for research use only.



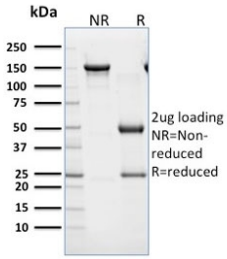
CD45RB Antibody BRA-11 Human Raji B Cell Lymphoma FACS. Flow cytometry of PFA-fixed human Raji B cell lymphoma cells using CD45RB Antibody BRA-11 / B Cell Marker. The histogram shows isotype control staining (red) and CD45RB Antibody staining (blue). The clear rightward fluorescence shift demonstrates detection of CD45RB on human Raji cells, supporting analysis of this PTPRC isoform in B cells by flow cytometry.



CD45RB Antibody BRA-11 Human Raji B Cell Lymphoma WB. Western blot analysis of human Raji B cell lymphoma lysate using CD45RB Antibody BRA-11 / B Cell Marker shows a prominent immunoreactive band within the expected molecular weight range of 147-220 kDa. The variable apparent molecular weight of CD45RB reflects extensive glycosylation of the extracellular domain. This CD45RB Antibody demonstrates detection of the PTPRC isoform in human B cells.



CD45RB Antibody BRA-11 Human Tonsil B Cell IHC. Immunohistochemistry of FFPE human tonsil tissue using CD45RB Antibody BRA-11 / B Cell Marker shows strong HRP-DAB brown staining of lymphoid cells, with prominent membrane-associated staining consistent with CD45RB 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 CD45RB Antibody highlights the B cell-associated PTPRC isoform in human lymphoid tissue.



SDS-PAGE analysis of purified, BSA-free CD45RB antibody (clone BRA-11) as confirmation of integrity and purity.

Description

CD45RB Antibody BRA-11 / B Cell 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 on nucleated hematopoietic cells. Alternative splicing within its extracellular region generates multiple CD45 isoforms with characteristic expression patterns among leukocyte populations. CD45RB is expressed by mature B lymphocytes and has also been reported in many lymphomas and leukemias of B-cell origin, making it relevant to B cell and lymphoid research.

PTPRC encodes a receptor-type protein tyrosine phosphatase with a large extracellular region, a single transmembrane domain and intracellular phosphatase domains. CD45 regulates Src family kinases and other components of antigen receptor signaling pathways and contributes to signaling through both T cell and B cell receptors. Through these functions, CD45 influences lymphocyte activation, differentiation and immune responsiveness.

CD45RB represents CD45 forms containing the alternatively encoded B exon within the extracellular domain. The variable extracellular regions distinguish CD45 isoforms, while the intracellular region is conserved. Expression of CD45RB varies among hematopoietic populations and can provide information about lymphocyte phenotype and differentiation. A CD45RB Antibody can therefore complement broader CD45 detection and other isoform-specific reagents when investigating B cells and other lymphocyte populations.

CD45RB is studied in immunology, hematology and lymphoid cancer research. Its expression on mature B lymphocytes provides a useful connection to B cell biology, while its presence in B-cell-derived lymphomas and leukemias makes it relevant to research involving malignant lymphoid populations. Analysis of CD45RB alongside other lineage and differentiation markers can provide additional information about immune cell phenotype without treating this PTPRC isoform as exclusive to B cells.

Clone BRA-11, also known as BRA-11G, is a mouse monoclonal antibody directed against human CD45RB and has been used in published research. The clone was generated using the non-T, non-B CALLA-positive ALL cell line REH as immunogen and has been validated for applications including western blot, immunohistochemistry, immunofluorescence and flow cytometry. A CD45RB Antibody provides a useful reagent for investigating B cell populations, lymphocyte differentiation and PTPRC isoform expression.

CD45RB is an alternatively spliced PTPRC isoform involved in lymphocyte differentiation and immune cell phenotyping; learn more about this target and related reagents on our CD45RB Antibody page.

Application Notes

The concentration stated for each application is a general starting point. Variations in protocols, secondaries and substrates may require the CD45RB Antibody BRA-11 / B 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

The non-T, non-B CALLA positive ALL cell line REH (Leucocyte Workshop IV and V) was used as the immunogen for this antibody.

Storage

The 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, B cell marker antibody

References (2)

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