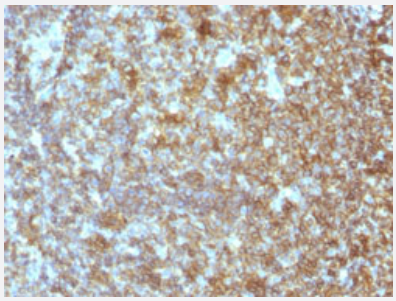
CD45RA monoclonal antibody, clone SPM504

Catalog # MAB13150 Size 100 ug

Applications



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections)

Immunohistochemical staining (Formalin-fixed paraffin-embedded sections) of human tonsil with CD45RA monoclonal antibody, clone SPM504 (Cat # MAB13150).

Specification

Product Description	Mouse monoclonal antibody raised against native human CD45RA.
Immunogen	Stimulated human leukocytes.
Host	Mouse
Theoretical MW (kDa)	205-220
Reactivity	Human
Specificity	Recognizes a protein of 205 kDa-220 kDa, identified as CD45RA (Workshop III). CD45RA is isoforms of the human leukocyte common antigen (CD45). Human CD45 contains three exons which encode peptide segments designated A, B and C, respectively. The differential splicing of the exons generates at least five isoforms, ABC, AB, BC, B and O. This antibody reacts with ABC and BC isoforms. CD45RA is expressed on 40-50% of peripheral $CD4^+$ T cells, 50% of peripheral $CD8^+$ T cells, B cells, and leukemic B cell lines. T cells expressing CD45RA are naive or virgin T cells. T cells expressing CD45RO are memory T cells. CD45RA and CD45RO define complementary, predominantly non-overlapping populations of resting peripheral T cells. This monoclonal antibody is useful in study on the subpopulation of $CD4^+$ or $CD8^+$ T cells. It can especially be used to differentiate T cell lymphomas ($CD45RO^{+ve}$) from B cell lymphomas ($CD45RA^{+ve}$).
Form	Liquid

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Purification	Protein A/G purification
Isotype	IgG1, kappa
Recommend Usage	Flow Cytometry (0.5-1 ug/10^6 cells in 0.1 mL) Immunofluorescence (1-2 ug/mL) Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) (0.5-1 ug/mL) The optimal working dilution should be determined by the end user.
Storage Buffer	In 10 mM PBS.
Storage Instruction	Store at -20 to -80°C. Aliquot to avoid repeated freezing and thawing.

Applications

- Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections)

  Immunohistochemical staining (Formalin-fixed paraffin-embedded sections) of human tonsil with CD45RA monoclonal antibody, clone SPM504 (Cat # MAB13150).

- Immunofluorescence

- Flow Cytometry

Gene Info — PTPRC

Entrez GeneID	5788
Gene Name	PTPRC
Gene Alias	B220, CD45, CD45R, GP180, LCA, LY5, T200
Gene Description	protein tyrosine phosphatase, receptor type, C
Omim ID	126200 151460 609532
Gene Ontology	Hyperlink

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Gene Summary	The protein encoded by this gene is a member of the protein tyrosine phosphatase (PTP) family. PTPs are known to be signaling molecules that regulate a variety of cellular processes including c ell growth, differentiation, mitotic cycle, and oncogenic transformation. This PTP contains an extra cellular domain, a single transmembrane segment and two tandem intracytoplasmic catalytic dom ains, and thus belongs to receptor type PTP. This gene is specifically expressed in hematopoietic cells. This PTP has been shown to be an essential regulator of T- and B-cell antigen receptor sign aling. It functions through either direct interaction with components of the antigen receptor comple xes, or by activating various Src family kinases required for the antigen receptor signaling. This P TP also suppresses JAK kinases, and thus functions as a regulator of cytokine receptor signaling. Four alternatively spliced transcripts variants of this gene, which encode distinct isoforms, have b een reported. [provided by RefSeq
Other Designations	CD45 antigen|T200 glycoprotein|T200 leukocyte common antigen|glycoprotein|leukocyte-commo n antigen|protein tyrosine phosphatase, receptor type, c polypeptide

Pathway

- Cell adhesion molecules (CAMs)
- Fc gamma R-mediated phagocytosis
- Primary immunodeficiency
- T cell receptor signaling pathway

Disease

- Arthritis
- Ascariasis
- Autoimmune Diseases
- Cardiomyopathy
- Diabetes Mellitus
- Genetic Predisposition to Disease
- Graves Disease
- Hashimoto Disease
- Hepatitis
- Hepatitis B

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- Hepatitis C
- HIV Infections
- Inflammatory Bowel Diseases
- Lupus Erythematosus
- Lymphopenia
- Multiple Sclerosis
- Paraparesis
- Scleroderma
- Severe combined immunodeficiency
- Thyroiditis

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