

## Datasheet

### CD45RA monoclonal antibody, clone SPM504

**Catalog Number:** MAB13150

**Regulatory Status:** For research use only (RUO)

**Product Description:** Mouse monoclonal antibody raised against native human CD45RA.

**Clone Name:** SPM504

**Immunogen:** Stimulated human leukocytes.

**Host:** Mouse

**Theoretical MW (kDa):** 205-220

**Reactivity:** Human

**Applications:** Flow Cyt, IF, IHC-P  
(See our web site product page for detailed applications information)

**Protocols:** See our web site at  
<http://www.abnova.com/support/protocols.asp> or product page for detailed protocols

**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<sup>+</sup> T cells, 50% of peripheral CD8<sup>+</sup> 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<sup>+</sup> or CD8<sup>+</sup> T cells. It can especially be used to differentiate T cell lymphomas (CD45RO<sup>+ve</sup>) from B cell lymphomas (CD45RA<sup>+ve</sup>).

**Form:** Liquid

**Purification:** Protein A/G purification

**Isotype:** IgG1, kappa

**Recommend Usage:** Flow Cytometry (0.5-1 ug/10<sup>6</sup> 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.

**Entrez GeneID:** 5788

**Gene Symbol:** PTPRC

**Gene Alias:** B220, CD45, CD45R, GP180, LCA, LY5, T200

**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 cell growth, differentiation, mitotic cycle, and oncogenic transformation. This PTP contains an extracellular domain, a single transmembrane segment and two tandem intracytoplasmic catalytic domains, 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 signaling. It functions through either direct interaction with components of the antigen receptor complexes, or by activating various Src family kinases required for the antigen receptor signaling. This PTP 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 been reported. [provided by RefSeq]