

Mouse Anti-Human PTPRC Monoclonal Antibody

Mouse, Monoclonal (PTPRC)

Cat. No. DMAB2503MH

Lot. No. (See product label)

PRODUCT INFORMATION

Antigen Description: 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.

Isotype: IgG_{2a}

Specificity: Recognizes the low molecular weight (Mr 180 kDa) isoform of the leukocyte common antigen (LCA) which is part of a family of protein tyrosine phosphatases. The CD45RO antigen is present on most thymocytes, about 40% of resting peripheral blood T-lymphocytes and the majority of T-cells in skin reactive infiltrates and T-cell malignancies. CD45RO is also found on a subset of B-cells and some B-cell lymphomas. NK cells do not express the CD45RO antigen. It is also present on monocytes, macrophages and granulocytes.

Clone: VCHL-2

Format: Phyco, Liquid

Host animal: Mouse.

Source: Tissue culture

Purification: R-phycoerythrin has been covalently conjugated to anti-human CD45RO and chromatographically purified to remove unconjugated antibody and dye, while achieving a fluorochrome/protein (F/P) molar ratio between 0.7-1.3. R-phycoerythrin has a maximum absorbance of 565.5nm.

Application: Suitable for use in immunohistochemistry (frozen and paraffin) and flow cytometry. We recommend using 1µg to stain 1.0 x 10⁶ cells in flow cytometric applications. Each laboratory should determine an optimum working titer for use in its particular application. Other applications have not been tested but use in such assays should not necessarily be excluded.

REFERENCES

1. Terry, L.A., et al., (1988), Immunology, **64**:331
2. Smith, S.H., et al., (1986), Immunology, **58**:63.

ANTIGEN GENE INFORMATION

Gene Name: [PTPRC protein tyrosine phosphatase, receptor type, C \[Homo sapiens\]](#)

Official Symbol: PTPRC

Synonyms: LCA; LY5; B220; CD45; L-CA; T200; CD45R; GP180; PTPRC; receptor-type tyrosine-protein phosphatase C; CD45 antigen; glycoprotein; T200 glycoprotein; OTHUMP-0000033813; OTTHUMP0000033816; OTHUMP00000-33817; OTTHUMP00000338574; leukocyte common antigen; leukocyte-common antigen; T200 leukocyte common antigen; protein tyrosine phosphatase, receptor type, c polypeptide

GeneID: [5788](#)

mRNA Refseq: [NM_002838](#)

Protein Refseq: [NP_002829](#)

MIM: [151460](#)

UniProt ID: P08575

Chromosome Location: 1q31-q32

Pathway: Axon guidance, organism-specific biosystem; B Cell Receptor Signaling Pathway, organism-specific biosystem; BCR signaling pathway, organism-specific biosystem; CXCR4-mediated signaling events, organism-specific biosystem; Cell adhesion molecules (CAMs), organismspecific biosystem; EPO Receptor Signaling, organismspecific biosystem; Fc gamma R-mediated phagocytosis, conserved biosystem; Phosphorylation of CD3 and TCR zeta chains, organism-specific biosystem; Primary immunodeficiency, conserved biosystem; Sema4D in semaphorin signaling, organism-specific biosystem; Signaling in Immune system, organism-specific biosystem; T cell receptor signaling pathway, conserved biosystem; TCR signaling, organism-specific biosystem.

Function: hydrolase activity; protein binding; protein kinase binding; protein tyrosine phosphatase activity; transmembrane receptor protein tyrosine phosphatase activity

PACKAGING

Concentration: 100µg/ml (OD280nm)

Buffer: 0.01M PBS, pH 7.2 containing 1% BSA

Preservative: 0.09% Sodium azide

Storage: Store (protected from light) at 2-8°C. **DO NOT FREEZE!**

Warning: This product contains sodium azide, which has been classified as Xn (Harmful), in European Directive 67/548/EEC in the concentration range of 0.1-1.0%. When disposing of this reagent through lead or copper plumbing, flush with copious volumes of water to prevent azide build-up in drains.