PTPRC monoclonal antibody, clone MEM-143

Catalog # MAB3874 Size 100 ug

Specification

Product Description	Mouse monoclonal antibody raised against native PTPRC.
Immunogen	Native purified PTPRC from human peripheral blood lymphocytes.
Host	Mouse
Theoretical MW (kDa)	180-240
Reactivity	Human
Specificity	This antibody reacts with a protein determinant of CD45RB, a 180-240 KDa singlechain type I membrane glycoprotein, variant of CD45 (CD45RB isoform). CD45RB isexpressed on a subset of T lymphocytes, B lymphocytes, monocytes, macrophages, granulocytes and dendritic cells.The MEM-143 is therefore not neuraminidase sensitive. The reactivity of This antibody can be blocked by a peptide including amino acids 79-88.
Form	Liquid
Isotype	IgG1
Recommend Usage	The optimal working dilution should be determined by the end user.
Storage Buffer	In PBS, pH 7.4 (0.09% sodium azide)
Storage Instruction	Store at 4°C. Do not freeze. Aliquot to avoid repeated freezing and thawing.
Note	This product contains sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.

Applications

- 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
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

Publication Reference

- Involvement of CD45 in DNA fragmentation in apoptosis induced by mitochondrial perturbing agents.

  Desharnais P, Dupere-Minier G, Hamelin C, Devine P, Bernier J.

  Apoptosis 2008 Feb; 13(2):197.

- Collagen-mediated survival signaling is modulated by CD45 in Jurkat T cells.

  Bijian K, Zhang L, Shen SH.

  Molecular Immunology 2007 May; 44(15):3682.

- Combinations of CD45 isoforms are crucial for immune function and disease.

  Dawes R, Petrova S, Liu Z, Wraith D, Beverley PC, Tchilian EZ.

  Journal of Immunology 2006 Mar; 176(6):3417.

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
- Hepatitis C
- HIV Infections
- Inflammatory Bowel Diseases
- Lupus Erythematosus
- Lymphopenia
- Multiple Sclerosis
- Paraparesis
- Scleroderma

- Severe combined immunodeficiency
- Thyroiditis