

Datasheet

PTPRC monoclonal antibody, clone MEM-143

Catalog Number: MAB3874

Regulatory Status: For research use only (RUO)

Product Description: Mouse monoclonal antibody raised against native PTPRC.

Clone Name: MEM-143

Immunogen: Native purified PTPRC from human peripheral blood lymphocytes.

Host: Mouse

Theoretical MW (kDa): 180-240

Reactivity: Human

Applications: Flow Cyt

(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: This antibody reacts with a protein determinant of CD45RB, a 180-240 kDa singlechain type I membrane glycoprotein, variant of CD45 (CD45RB isoform). CD45RB is expressed 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.

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]

References:

1. 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):197-212.
2. Collagen-mediated survival signaling is modulated by CD45 in Jurkat T cells. Bijian K, Zhang L, Shen SH. *Mol Immunol*. 2007 Jul;44(15):3682-90. Epub 2007 May 23.
3. Combinations of CD45 isoforms are crucial for immune function and disease. Dawes R, Petrova S, Liu Z, Wraith D, Beverley PC, Tchilian EZ. *J Immunol*. 2006 Mar 15;176(6):3417-25.