

## Datasheet

### PTPRC monoclonal antibody, clone MEM-28 (FITC)

**Catalog Number:** MAB4583

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

**Product Description:** Mouse monoclonal antibody raised against native PTPRC.

**Clone Name:** MEM-28

**Immunogen:** Native purified PTPRC from human thymocytes and T lymphocytes.

**Host:** Mouse

**Theoretical MW (kDa):** 180-220

**Reactivity:** Human

**Applications:** Flow Cyt, IF-CTC  
(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 all alternative forms of human CD45 antigen (Leukocyte Common Antigen), a 180-220 kDa single chain type I transmembrane protein expressed at high level on all cells of hematopoietic origin, except erythrocytes and platelets.

**Form:** Liquid

**Conjugation:** FITC

**Isotype:** IgG1

**Recommend Usage:** Flow Cytometry (20 ul in human blood cells 100 ul in whole blood or 10<sup>6</sup> cells in a suspension)

The optimal working dilution should be determined by the end user.

**Storage Buffer:** In PBS (0.2% BSA, 0.09% sodium azide)

**Storage Instruction:** Store in the dark at 4 °C. Do not freeze.

Avoid prolonged exposure to light.

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. Monoclonal antibodies against human leucocyte antigens. II. Antibodies against CD45 (T200), CD3 (T3), CD43, CD10 (CALLA), transferrin receptor (T9), a novel broadly expressed 18-kDa antigen (MEM-43) and a novel antigen of restricted expression (MEM-74). Horejsi V, Angelisova P, Bazil V, Kristofova H, Stoyanov S, Stefanova I, Hausner P, Vosecky M, Hilgert I. Folia Biol (Praha). 1988;34(1):23-34.