



# CD45 Monoclonal Antibody

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| <b>Catalog No</b>                  | YP-Ab-13805                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Isotype</b>                     | IgG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Reactivity</b>                  | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Applications</b>                | WB;IHC;IF;ELISA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Gene Name</b>                   | PTPRC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Immunogen</b>                   | Purified recombinant fragment of CD45 expressed in E. Coli.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Specificity</b>                 | CD45 Monoclonal Antibody detects endogenous levels of CD45 protein.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Formulation</b>                 | Ascitic fluid containing 0.03% sodium azide,0.5% BSA, 50%glycerol.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Source</b>                      | Monoclonal, Mouse                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Purification</b>                | Affinity purification                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Dilution</b>                    | WB: 1/500 - 1/2000. IHC: 1/200 - 1/1000. ELISA: 1/10000.. IF 1:50-200                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Concentration</b>               | 1 mg/ml                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Purity</b>                      | ≥90%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Storage Stability</b>           | -20°C/1 year                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Synonyms</b>                    | 4E9B2;EC:3.1.3.48;GP180;L CA;LCA;CD45;PTPRC;Receptor-type tyrosine-protein phosphatase C;Leukocyte common antigen;L-CA;T200;CD antigen CD45                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Observed Band</b>               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Calculated Molecular Weight</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Cell Pathway</b>                | Cell membrane ; Single-pass type I membrane protein . Membrane raft . Colocalized with DPP4 in membrane rafts. .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Tissue Specificity</b>          | Isoform 1: Detected in thymocytes. Isoform 2: Detected in thymocytes. Isoform 3: Detected in thymocytes. Isoform 4: Not detected in thymocytes. Isoform 5: Detected in thymocytes. Isoform 6: Not detected in thymocytes. Isoform 7: Detected in thymocytes. Isoform 8: Not detected in thymocytes.                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Function</b>                    | alternative products:At least 8 isoforms are produced,catalytic activity:Protein tyrosine phosphate + H(2)O = protein tyrosine + phosphate.,disease:Defects in PTPRC are a cause of severe combined immunodeficiency autosomal recessive T-cell-negative/B-cell-positive/NK-cell-positive (T(-)B(+)NK(+))SCID [MIM:608971]. SCID refers to a genetically and clinically heterogeneous group of rare congenital disorders characterized by impairment of both humoral and cell-mediated immunity, leukopenia, and low or absent antibody levels. Patients with SCID present in infancy with recurrent, persistent infections by opportunistic organisms. The common characteristic of all types of SCID is absence of T-cell- |



mediated cellular immunity due to a defect in T-cell development.,  
disease:Genetic variations in PTPRC are involved in multiple sclerosis  
susceptibility (MS) [MIM:126200]. MS is a neurodegenerative dis

## Background

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, mitosis, and oncogenic transformation. This PTP contains an extracellular domain, a single transmembrane segment and two tandem intracytoplasmic catalytic domains, and thus is classified as a receptor type PTP. 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. Alternatively spliced transcripts variants of this gene, which enc

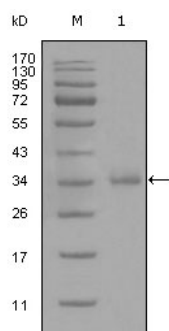
## matters needing attention

Avoid repeated freezing and thawing!

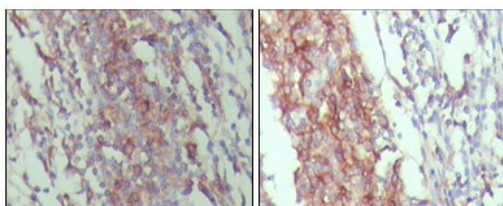
## Usage suggestions

This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.

## Products Images



Western Blot analysis using CD45 Monoclonal Antibody against truncated CD45 recombinant protein (1).



Immunohistochemistry analysis of paraffin-embedded human lymph node tissue, showing membrane and cytoplasmic localization with DAB staining using CD45 Monoclonal Antibody.