

**Anti-CD45 Mouse mAb**  
**Purified Mouse Monoclonal Antibody (Mab)**  
**Catalog # AP53490****Specification**

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**Anti-CD45 Mouse mAb - Product Information**

Application	WB, IHC
Primary Accession	<a href="#">P08575</a>
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse IgG1
Immunogen	Purified recombinant fragment of human PTPRC (AA: 928-989) expressed in E. Coli.
Purification	Affinity Purification
Calculated MW	147.3kDa KDa
Antigen Region	aa928-989

**Anti-CD45 Mouse mAb - Additional Information****Gene ID** 5788**Other Names**

LCA; LY5; B220; CD45; L-CA; T200; CD45R; GP180

**Dilution**

WB~~1:1000

IHC~~1:400

**Format**

Purified antibody in PBS with 0.09% (W/V) sodium azide

**Storage**

Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

**Anti-CD45 Mouse mAb - Protein Information****Name** PTPRC ([HGNC:9666](#))**Synonyms** CD45**Function**

Protein tyrosine-protein phosphatase required for T-cell activation through the antigen receptor (PubMed:<a href="http://www.uniprot.org/citations/35767951" target="\_blank">35767951</a>). Acts as a positive regulator of T-cell coactivation upon binding to DPP4. The first PTPase domain has enzymatic activity, while the second one seems to affect the substrate specificity of the first one. Upon T-cell activation, recruits and dephosphorylates SKAP1 and FYN. Dephosphorylates LYN, and thereby modulates LYN activity (By similarity). Interacts with CLEC10A at antigen presenting

cell-T cell contact; CLEC10A on immature dendritic cells recognizes Tn antigen- carrying PTPRC/CD45 receptor on effector T cells and modulates T cell activation threshold to limit autoreactivity.

#### **Cellular Location**

Cell membrane; Single-pass type I membrane protein. Membrane raft. Synapse. Note=Colocalized with DPP4 in membrane rafts.

#### **Tissue Location**

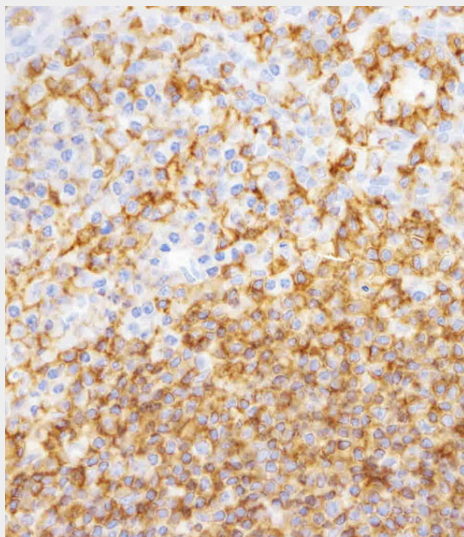
Isoform 1: Detected in thymocytes. Isoform 2: Detected in thymocytes. Isoform 3: Detected in thymocytes. Isoform 4: Not detected in thymocytes. Isoform 5: Detected in thymocytes. Isoform 6: Not detected in thymocytes. Isoform 7: Detected in thymocytes Isoform 8: Not detected in thymocytes.

### **Anti-CD45 Mouse mAb - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### **Anti-CD45 Mouse mAb - Images**



Immunohistochemical analysis of CD45 in Human tonsil tissue sections (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde at room temperature; antigen retrieval was by heat mediation with a EDTA buffer (pH9.0). Samples were incubated with primary antibody (1/400) for 1 hours at room temperature. A undiluted biotinylated CRF Anti-Polyvalent HRP Polymer antibody was used as the secondary antibody.

### **Anti-CD45 Mouse mAb - 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 encode distinct isoforms, have been reported.