

**Anti-CD45 / LCA (B-Cell Marker) Antibody**  
**Mouse Monoclonal Antibody**  
**Catalog # AH13472****Specification**

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**Anti-CD45 / LCA (B-Cell Marker) Antibody - Product Information**

Application	IHC-P, IF, FC
Primary Accession	<a href="#">P08575</a>
Other Accession	<a href="#">654514</a>
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgG2a, kappa
Calculated MW	147486

**Anti-CD45 / LCA (B-Cell Marker) Antibody - Additional Information****Gene ID** 5788**Other Names**

B220, CD45R, GP180, Leukocyte common antigen (LCA), Loc, Ly-5, Lyt-4, Protein tyrosine phosphatase receptor type C (PTPRC), Receptor-type tyrosine-protein phosphatase C, T200 glycoprotein

**Application Note**

IHC-P~~N/A  
IF~~1:50~200  
FC~~1:10~50

**Format**

200ug/ml of Ab purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available WITHOUT BSA & azide at 1.0mg/ml.

**Storage**

Store at 2 to 8°C. Antibody is stable for 24 months.

**Precautions**

Anti-CD45 / LCA (B-Cell Marker) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**Anti-CD45 / LCA (B-Cell Marker) Antibody - Protein Information****Name** PTPRC ([HGNC:9666](#))**Synonyms** CD45**Function**

Protein tyrosine-protein phosphatase required for T-cell activation through the antigen receptor (PubMed: [35767951](http://www.uniprot.org/citations/35767951)).

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**

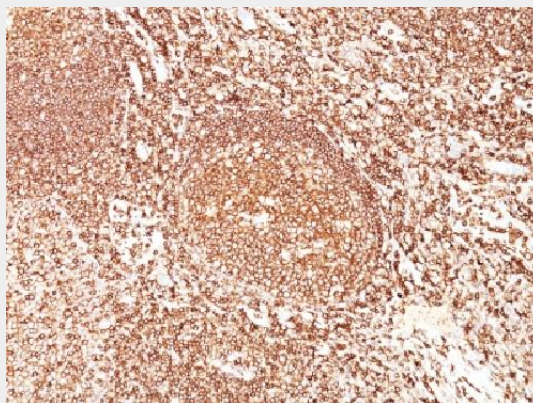
Isoform 1: Detected in thymocytes. Isoform 2: Detected in thymocytes. Isoform 3: Detected in thymocytes. Isoform 4: Not detected in thymocytes. Isoform 5: Detected in thymocytes. Isoform 6: Not detected in thymocytes. Isoform 7: Detected in thymocytes Isoform 8: Not detected in thymocytes.

### **Anti-CD45 / LCA (B-Cell Marker) Antibody - 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 / LCA (B-Cell Marker) Antibody - Images**



Formalin-fixed, paraffin-embedded human Tonsil stained with CD45 Monoclonal Antibody (F10-89-4).

### **Anti-CD45 / LCA (B-Cell Marker) Antibody - Background**

CD45R, also designated CD45 and PTPRC, has been identified as a transmembrane glycoprotein, broadly expressed among hematopoietic cells. Multiple isoforms of CD45R are distributed throughout the immune system according to cell type. These isoforms arise because of alternative splicing of exons 4, 5, and 6. The corresponding protein domains are characterized by the binding

of monoclonal antibodies specific for CD45RA (exon 4), CD45RB (exon 5), CD45RC (exon 6) and CD45RO (exons 4 to 6 spliced out). The variation in these isoforms is localized to the extracellular domain of CD45R, while the intracellular domain is conserved. CD45R functions as a phosphor-tyrosine phosphatase. Antibody to CD45 is useful in differential diagnosis of lymphoid tumors from non-hematopoietic undifferentiated neoplasms.