

**CD45 / LCA (Leucocyte Marker) Antibody - With BSA and Azide**  
**Mouse Monoclonal Antibody [Clone 135-4C5 ]**  
**Catalog # AH12213**

### Specification

---

#### CD45 / LCA (Leucocyte Marker) Antibody - With BSA and Azide - Product Information

Application	IHC, IF, FC
Primary Accession	<a href="#">P08575</a>
Other Accession	<a href="#">5788</a> , <a href="#">654514</a>
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgG2b, kappa
Calculated MW	180-220kDa KDa

#### CD45 / LCA (Leucocyte Marker) Antibody - With BSA and Azide - Additional Information

Gene ID 5788

#### Other Names

Receptor-type tyrosine-protein phosphatase C, 3.1.3.48, Leukocyte common antigen, L-CA, T200, CD45, PTPRC, CD45

#### Application Note

IHC~~1:100~500  
IF~~1:50~200  
FC~~1:10~50

#### Storage

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

#### Precautions

CD45 / LCA (Leucocyte Marker) Antibody - With BSA and Azide is for research use only and not for use in diagnostic or therapeutic procedures.

#### CD45 / LCA (Leucocyte Marker) Antibody - With BSA and Azide - 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**

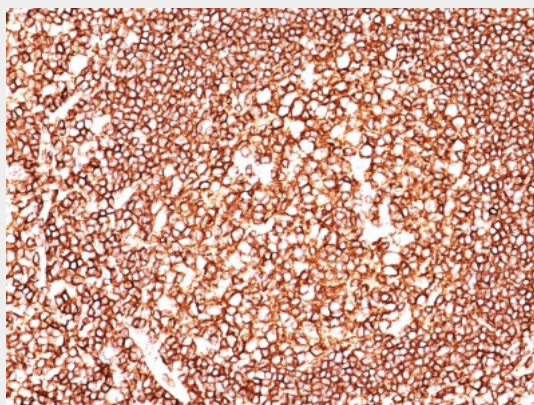
Isoform 1: Detected in thymocytes. Isoform 2: Detected in thymocytes. Isoform 3: Detected in thymocytes. Isoform 4: Not detected in thymocytes. Isoform 5: Detected in thymocytes. Isoform 6: Not detected in thymocytes. Isoform 7: Detected in thymocytes Isoform 8: Not detected in thymocytes.

### **CD45 / LCA (Leucocyte Marker) Antibody - With BSA and Azide - 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](#)

### **CD45 / LCA (Leucocyte Marker) Antibody - With BSA and Azide - Images**



Formalin-fixed, paraffin-embedded human Tonsil stained with CD45 Monoclonal Antibody (135-4C5).

### **CD45 / LCA (Leucocyte Marker) Antibody - With BSA and Azide - 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. This MAb reacts with all isoforms of CD45R expressed by all

hematopoietic cells, except erythrocytes, having a higher level of expression on lymphocytes than on granulocytes (Workshop IV). Antibody to CD45 is useful in differential diagnosis of lymphoid tumors from non-hematopoietic undifferentiated neoplasms.

**CD45 / LCA (Leucocyte Marker) Antibody - With BSA and Azide - References**

Alsinet E, et. al. European Journal of Immunology, 1990, 20(12):2801-4. | Knapp, W. et. al. Leucocyte Typing IV, p531-536, Oxford Univ. Press, 1989