

**Anti-CD45 Picoband Antibody**  
**Catalog # ABO12471****Specification**

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**Anti-CD45 Picoband Antibody - Product Information**

|                   |                        |
|-------------------|------------------------|
| Application       | <b>WB, IHC-P</b>       |
| Primary Accession | <a href="#">P08575</a> |
| Host              | <b>Rabbit</b>          |
| Reactivity        | <b>Human</b>           |
| Clonality         | <b>Polyclonal</b>      |
| Format            | <b>Lyophilized</b>     |

**Description**

Rabbit IgG polyclonal antibody for Receptor-type tyrosine-protein phosphatase C (PTPRC) detection. Tested with WB, IHC-P in Human.

**Reconstitution**

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

**Anti-CD45 Picoband Antibody - 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

**Calculated MW**

147254 MW KDa

**Application Details**

Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, By Heat<br><br>Western blot, 0.1-0.5 µg/ml, Human<br>

**Subcellular Localization**

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

**Protein Name**

Receptor-type tyrosine-protein phosphatase C

**Contents**

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na<sub>2</sub>HPO<sub>4</sub>, 0.05mg Na<sub>3</sub>.

**Immunogen**

A synthetic peptide corresponding to a sequence at the C-terminus of human CD45(1214-1254aa EQYQFLYDVIASTYPAQNGQVKNNHQEDKIEFDNEVDKVK), different from the related mouse sequence by eight amino acids, and from the related rat sequence by ten amino acids.

**Purification**

Immunogen affinity purified.

**Cross Reactivity**

No cross reactivity with other proteins.

**Storage**

**At -20°C for one year. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for a longer time. Avoid repeated freezing and thawing.**

**Anti-CD45 Picoband 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.

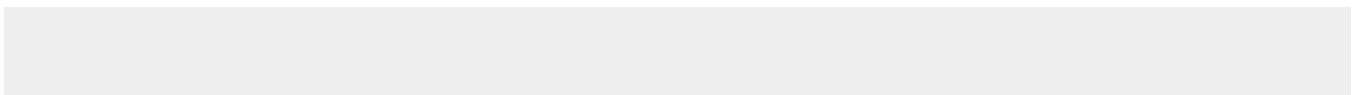
**Tissue Location**

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 Picoband Antibody - Protocols**

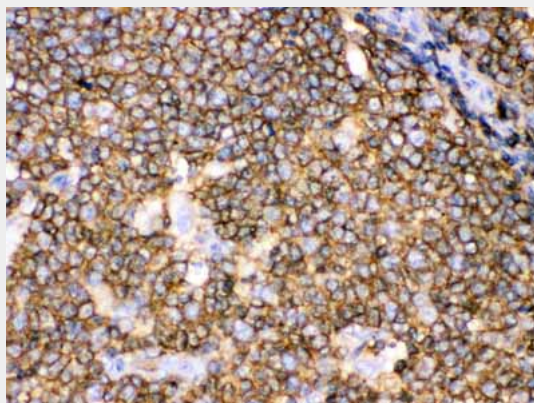
Provided below are standard protocols that you may find useful for product applications.

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

**Anti-CD45 Picoband Antibody - Images**



Anti- CD45 Picoband antibody, ABO12471, Western blotting All lanes: Anti CD45 (ABO12471) at 0.5ug/ml  
Lane 1: JURKAT Whole Cell Lysate at 40ug  
Lane 2: HL-60 Whole Cell Lysate at 40ug  
Lane 3: K562 Whole Cell Lysate at 40ug  
Predicted bind size: 220KD  
Observed bind size: 220KD



Anti- CD45 Picoband antibody, ABO12471, IHC(P) IHC(P): Human Tonsil Tissue

#### Anti-CD45 Picoband Antibody - Background

CD45 (Cluster of Differentiation 45), also known as PTPRC, LCA or CD45R, is an enzyme that, in humans, is encoded by the PTPRC gene. It is a member of the protein tyrosine phosphatase (PTP) family. CD45 is a major high molecular mass leukocyte cell surface molecule which is also an integral membrane protein tyrosine phosphatase. The cytogenetic location of CD45 is 1q31.3-q32.1. This gene is especially a prototype for transmembrane protein-tyrosine phosphatase (PTP). Targeted disruption of the CD45 gene leads to enhanced cytokine and interferon receptor-mediated activation of JAKs and STAT proteins. In vitro, CD45 directly dephosphorylates and binds to JAKs. Functionally, CD45 negatively regulates interleukin-3-mediated cellular proliferation, erythropoietin-dependent hematopoiesis, and antiviral responses in vitro and in vivo. In addition, CD45 has been best studied in T cells, where it determines T cell receptor signaling thresholds. CD45 is moved into or out of the immunological synapse (IS) membrane microdomain depending on the relative influence of interaction with the extracellular galectin lattice or the intracellular actin cytoskeleton. Galectin interaction can be finetuned by varying usage of the heavily Oglycosylated spliced regions and sialylation of Nlinked carbohydrates.