

Anti-CD45 Picoband Antibody
Catalog # ABO11804**Specification**

Anti-CD45 Picoband Antibody - Product Information

Application	WB, IHC-P
Primary Accession	P08575
Host	Rabbit
Reactivity	Human
Clonality	Polyclonal
Format	Lyophilized

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
Western blot, 0.1-0.5 µg/ml, Human

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 Na₂HPO₄, 0.05mg Na₃.

Immunogen

E.coli-derived human CD45 recombinant protein (Position: R1113-S1304). Human CD45 shares 68% amino acid (aa) sequence identity with both mouse and rat CD45.

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.

Sequence Similarities

Belongs to the protein-tyrosine phosphatase family. Receptor class 1/6 subfamily.

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). 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.

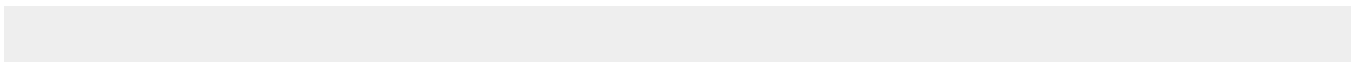
Tissue Location

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

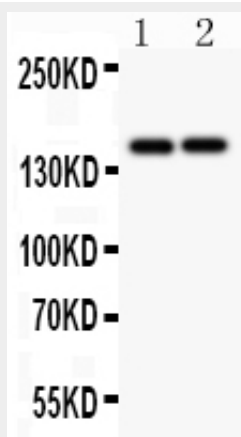
Provided below are standard protocols that you may find useful for product applications.

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

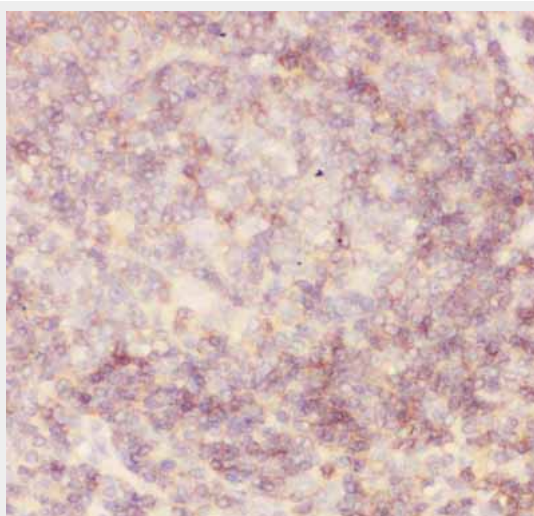
Anti-CD45 Picoband Antibody - Images



Anti-CD45 Picoband antibody, ABO11804-1.jpg All lanes: Anti CD45 (ABO11804) at 0.5ug/ml WB: Recombinant Human CD45 Protein 0.5ng Predicted bind size: 47KD Observed bind size: 47KD



Anti-CD45 Picoband antibody, ABO11804-2.jpg All lanes: Anti CD45 (ABO11804) at 0.5ug/ml Lane 1: JURKAT Whole Cell Lysate at 40ug Lane 2: RAJI Whole Cell Lysate at 40ug Predicted bind size: 147KD Observed bind size: 147KD



Anti-CD45 Picoband antibody, ABO11804-3.JPG 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. CD45 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. 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.