10320 Camino Santa Fe, Suite G
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Tel: 858.875.1900 Fax: 858.875.1999

CD-45 Antibody (CT)

Rabbit Polyclonal Antibody

Catalog # ABV11284

Specification

CD-45 Antibody (CT) - Product Information

Application	**WB, IHC, FC**
Primary Accession	P08575
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**

CD-45 Antibody (CT) - Additional Information

Gene ID 5788

Positive Control	**Western blot: Jurkat cell lysate, IHC: human tonsil tissue, FACS: Jurkat cells**
Application & Usage	**Western blot: ~1:1000, IHC: ~1:10–1:50, FACS: ~1:10-1:50.**

Other Names
PTPRC; CD45; Receptor-type tyrosine-protein phosphatase C; Leukocyte common antigen; T200; Flags: Precursor.

Target/Specificity
CD-45

Antibody Form
Liquid

Appearance
Colorless liquid

Formulation
100 µl of antibody in PBS with 0.09% (W/V) sodium azide

Handling
The antibody solution should be gently mixed before use.

Reconstitution & Storage
-20 °C

Background Descriptions

Precautions
CD-45 Antibody (CT) is for research use only and not for use in diagnostic or therapeutic procedures.

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CD-45 Antibody (CT) - 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.

CD-45 Antibody (CT) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

CD-45 Antibody (CT) - Images

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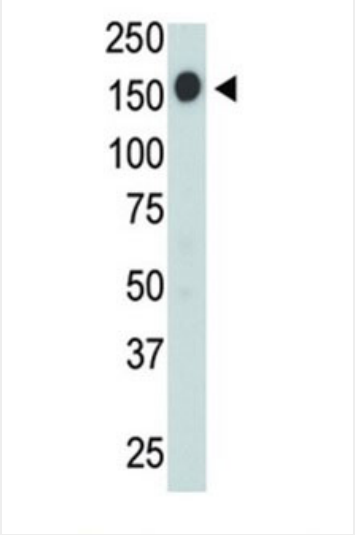
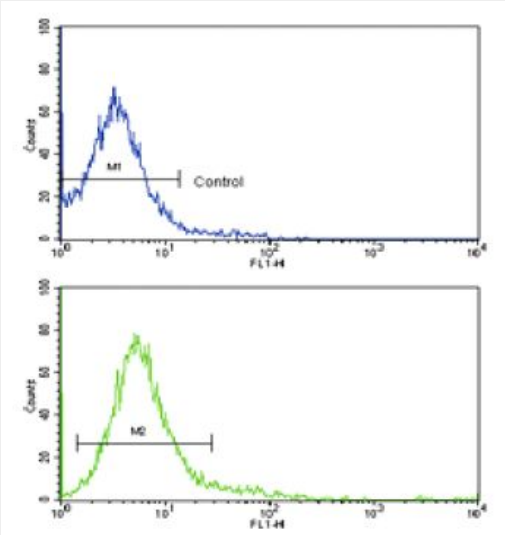


The anti-CD45 (C-term) pAb is used in Western blot to detect CD45 in Jurkat cell lysate.



FACS analysis of Jurkat cells using CD45 Antibody (C-term) (bottom histogram) compared to a negative control cell (top histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

CD-45 Antibody (CT) - Background

CD45 has been identified as a transmembrane glycoprotein, broadly expressed among hematopoietic cells. Multiple isoforms of CD45 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 CD45, while the intracellular domain is conserved. CD45 functions as a phosphotyrosine phosphatase, a vital component for efficient tyrosine phosphorylation induction by the TCR/CD3 complex. The tyrosine phosphatase activity of CD45 is contained within the conserved intracellular domain. Src and Syk family protein tyrosine kinases are utilized by the TCR/CD3 complex to initiate signaling cascades. Several members of these two families, including Lck, Fyn and ZAP-70, have been implicated as physiological substrates of CD45.