

CD-45 Antibody (CT)
Rabbit Polyclonal Antibody
Catalog # ABV11284**Specification**

CD-45 Antibody (CT) - Product Information

Application	WB, 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.

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

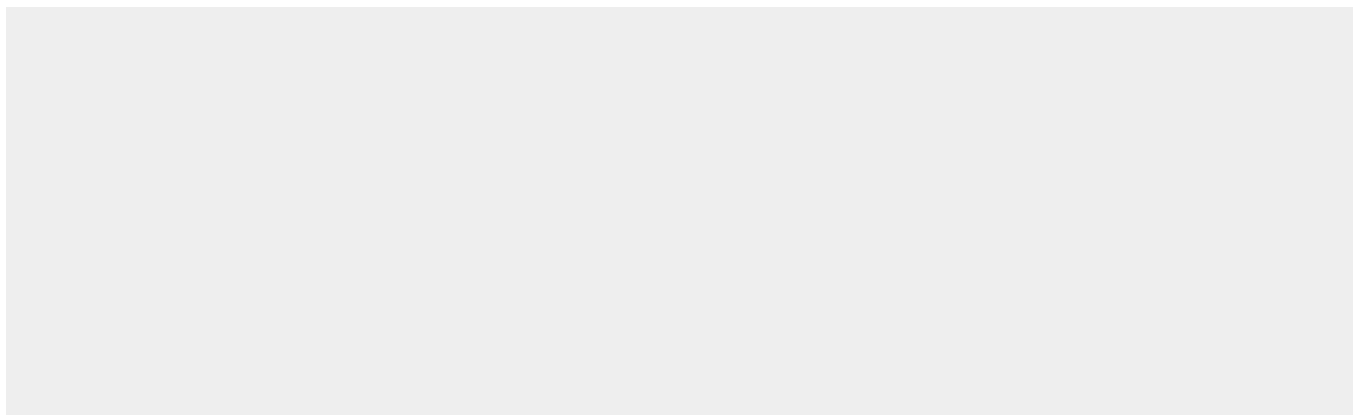
Isoform 1: Detected in thymocytes. Isoform 2: Detected in thymocytes. Isoform 3: Detected in thymocytes. Isoform 4: Not detected in thymocytes. Isoform 5: Detected in thymocytes. Isoform 6: Not detected in thymocytes. Isoform 7: Detected in thymocytes Isoform 8: Not detected in thymocytes.

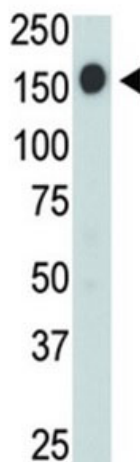
CD-45 Antibody (CT) - Protocols

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

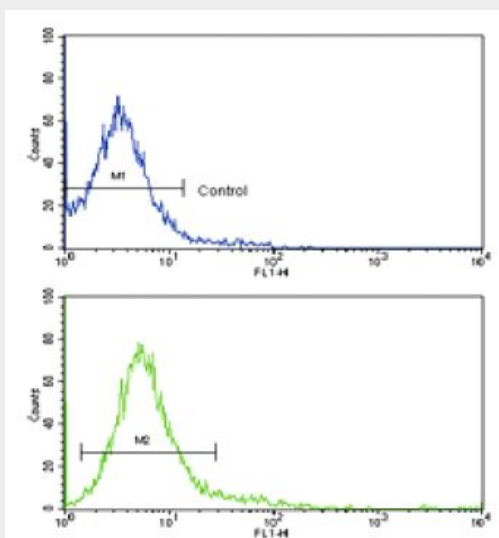
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

CD-45 Antibody (CT) - Images





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.