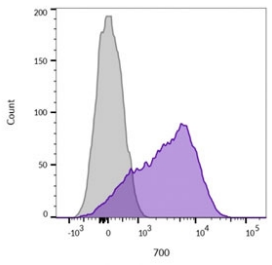
CD45 Antibody 136-4B5 / Hematopoietic Cell Marker [clone 136-4B5] (V2394)

Catalog No.	Formulation	Size
V2394-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V2394-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V2394SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V2394IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

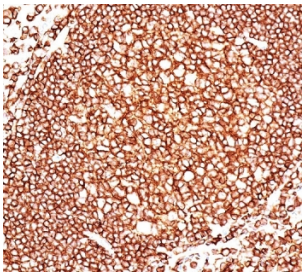
Citations (8)

Bulk quote request

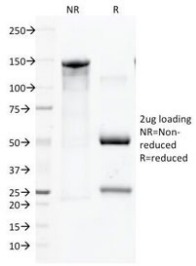
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	136-4B5
Purity	Protein G affinity chromatography
Buffer	1X PBS, pH 7.4
UniProt	P08575
Localization	Cell surface and cytoplasmic
Applications	Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RT Flow cytometry: 1-2ug/million cells
Limitations	This CD45 Antibody 136-4B5 / Hematopoietic Cell Marker is available for research use only.



CD45 Antibody 136-4B5 Human Jurkat T Cell Leukemia FACS. Flow cytometry of live human Jurkat T cell leukemia cells using CD45 Antibody 136-4B5 / Hematopoietic Cell Marker. The histogram shows CD45 Antibody staining (purple) and unstained cells (gray). The rightward fluorescence shift demonstrates detection of cell-surface CD45/PTPRC on live Jurkat cells. Clone 136-4B5 supports analysis of this hematopoietic cell marker in human T cells.



CD45 Antibody 136-4B5 Human Tonsil Hematopoietic Cells IHC. Immunohistochemistry of FFPE human tonsil tissue using CD45 Antibody 136-4B5 / Hematopoietic Cell Marker shows strong HRP-DAB brown staining outlining lymphoid cells, consistent with the cell-surface localization of CD45/PTPRC. The widespread staining highlights the abundance of CD45-positive hematopoietic cells within human tonsil tissue.



SDS-PAGE Analysis of Purified, BSA-Free CD45 Antibody (clone 135-4B5). Confirmation of Integrity and Purity of the Antibody.

Description

CD45 Antibody 136-4B5 / Hematopoietic Cell Marker recognizes CD45, a transmembrane protein tyrosine phosphatase encoded by the PTPRC gene. CD45, also known as leukocyte common antigen, LCA or T200, is broadly expressed on nucleated cells of hematopoietic origin. Its extensive distribution among leukocyte populations makes CD45 one of the most widely studied markers for identifying and characterizing hematopoietic cells in immune system research.

CD45 is a receptor-type protein tyrosine phosphatase composed of a large extracellular region, a single transmembrane domain and intracellular phosphatase domains. Through its phosphatase activity, PTPRC regulates Src family kinases and other signaling proteins involved in antigen receptor pathways. These interactions influence signaling through the T cell receptor and B cell receptor and contribute to lymphocyte activation, differentiation, survival and immune responsiveness. CD45 therefore functions not only as a hematopoietic cell marker but also as an important regulator of immune cell signaling.

Alternative splicing of PTPRC generates several CD45 isoforms that differ in portions of their extracellular domains. Commonly studied forms include CD45RA, CD45RB and CD45RO, which exhibit characteristic expression patterns among leukocyte populations and different stages of lymphocyte differentiation. Changes in CD45 isoform expression are frequently investigated in studies of T cell maturation, activation and memory, while general CD45 detection provides a broader approach for studying hematopoietic cell populations.

CD45 is extensively studied in immunology, hematology, inflammation and cancer research. Its broad expression across hematopoietic cells supports its use in research involving lymphoid tissues, peripheral blood leukocytes and immune cell populations within tumors and other tissue environments. PTPRC is also relevant to leukemia and lymphoma research, where CD45 expression can contribute to the characterization of hematopoietic cell populations. Its combination of broad leukocyte expression and signaling activity gives CD45 substantial utility in studies of normal and disease-associated immune biology.

Clone 136-4B5 is a mouse monoclonal antibody directed against human CD45/PTPRC and has been used in published research. Its established clone identity supports studies of CD45 expression and the characterization of leukocyte and hematopoietic cell populations. A CD45 Antibody can support research into hematopoietic cell identification, lymphocyte biology, immune cell characterization and PTPRC-mediated signaling.

CD45 is encoded by PTPRC and functions as a key regulator of leukocyte signaling and hematopoietic cell biology; additional reagents targeting this protein are available on the CD45 Antibody page.

Application Notes

Due to variation in protocol and secondary antibody used, the CD45 Antibody 136-4B5 / Hematopoietic Cell Marker may need to be titered for optimal performance.

1. FFPE staining requires boiling tissue sections in 10mM citrate buffer, pH 6.0, for 10-20 min followed by cooling at RT for 20 minutes.
2. The prediluted format is supplied in a dropper bottle and is optimized for use in IHC. After epitope retrieval step (if required), drip mAb solution onto the tissue section and incubate at RT for 30 min.

Immunogen

Stimulated human leukocytes were used as the immunogen for the CD45 antibody.

Storage

CD45 antibody (with azide) can be stored at 2-8oC. The azide-free format should be aliquoted and stored at -20oC or colder.

Alternate Names

CD45 antibody, PTPRC antibody, Leukocyte common antigen antibody, LCA antibody, Protein tyrosine phosphatase receptor type C antibody, T200 antibody

References (2)

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