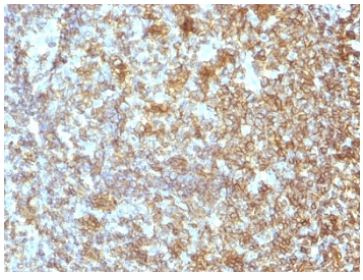
LCA Antibody / Leukocyte Common Antigen Antibody [clone SPM496] (V2400)

Catalog No.	Formulation	Size
V2400-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V2400-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V2400SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V2400IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

Bulk quote request

Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	SPM496
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
Limitations	This LCA Antibody / Leukocyte Common Antigen Antibody is available for research use only.



LCA Antibody Human Tonsil IHC. Immunohistochemistry of FFPE human tonsil tissue using LCA Antibody / Leukocyte Common Antigen Antibody shows HRP-DAB brown staining of lymphoid cells, consistent with the broad expression of LCA/CD45 in leukocytes. Clone SPM496 demonstrates detection of leukocyte common antigen in human lymphoid tissue.

Description

LCA Antibody / Leukocyte Common Antigen Antibody recognizes leukocyte common antigen (LCA), more commonly designated CD45, a transmembrane protein tyrosine phosphatase encoded by the PTPRC gene. CD45 is broadly expressed on nucleated cells of hematopoietic origin and is one of the most widely used markers for identifying leukocytes. Its extensive expression across immune cell populations makes LCA an important target for research involving lymphoid tissues, hematopoietic cells and immune cell characterization.

CD45/PTPRC 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, CD45 regulates Src family kinases and other components of antigen receptor signaling pathways. These interactions influence signaling through the T cell receptor and B cell receptor and contribute to lymphocyte activation, differentiation, survival and immune responsiveness. A Leukocyte Common Antigen Antibody can therefore be useful for investigating both hematopoietic cell identity and CD45-associated immune biology.

Alternative splicing of PTPRC produces multiple CD45 isoforms that differ in portions of their extracellular domains. Commonly studied forms include CD45RA, CD45RB and CD45RO, which display characteristic expression patterns among leukocyte populations and stages of lymphocyte differentiation. These isoforms are widely investigated in studies of T cell maturation, activation and memory. General LCA Antibody reagents target the broader CD45 protein family, while isoform-specific antibodies provide tools for selectively studying individual CD45 forms.

Leukocyte common antigen is extensively studied in immunology, hematology and cancer research. Its broad hematopoietic expression supports the identification and characterization of leukocytes in blood, lymphoid organs and other tissues. LCA/CD45 is also important in leukemia and lymphoma research and in studies examining immune cell infiltration within tumors and other tissue environments. As both a pan-leukocyte marker and regulator of immune signaling, PTPRC connects cellular identification with the functional biology of the immune system.

Clone SPM496 is a mouse monoclonal antibody directed against human LCA/CD45. The antibody supports studies of leukocyte common antigen expression and the characterization of hematopoietic and immune cell populations. A Leukocyte Common Antigen Antibody can support research into leukocyte identification, lymphocyte biology, hematopoietic cell characterization and immune system function.

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 LCA Antibody / Leukocyte Common Antigen Antibody may need to be titered for optimal performance.

1. FFPE staining requires boiling tissue sections in pH 9 10mM Tris with 1mM EDTA 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 LCA antibody.

Storage

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

Alternate Names

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

References (2)

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