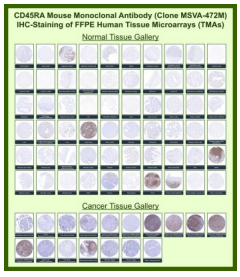
CD45RA Antibody for IHC / PTPRC Immunohistochemistry Antibody [clone MSVA-472M] (V5979)

Catalog No.	Formulation	Size
V5979-100UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	100 ug
V5979-20UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	20 ug

Recombinant | MOUSE MONOCLONAL

Bulk quote request

Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Recombinant Mouse Monoclonal
Isotype	Mouse IgG2a, kappa
Clone Name	MSVA-472M
UniProt	P08575
Localization	Cell membrane, Membrane raft
Applications	Immunohistochemistry (FFPE) : 1:100-1:200
Limitations	This CD45RA Antibody for IHC / PTPRC Immunohistochemistry Antibody is available for research use only.



CD45RA Antibody for IHC Tissue Microarray (TMA). Immunohistochemistry analysis of Protein tyrosine phosphatase receptor type C PTPRC, also known as CD45RA, in formalin-fixed paraffin-embedded human normal and cancer tissue microarrays using recombinant mouse monoclonal CD45RA antibody clone MSVA-472M. Tissue microarray (TMA) staining with HRP-DAB brown chromogen demonstrates strong membranous localization in lymphoid cell populations, prominently highlighting lymphocytes within tonsil, spleen, thymus, and lymph node, while non-hematopoietic epithelial and stromal tissues remain largely negative. Within tumor tissue microarrays, diffuse membranous positivity is observed in CD45RA-positive lymphoid malignancies, while most non-lymphoid tumors remain negative with staining restricted to infiltrating immune cells. Evaluation across large TMA panels enables direct comparison of PTPRC expression across diverse tissue types under standardized conditions. The observed staining patterns align with reported PTPRC expression profiles in publicly available datasets including the Human Protein Atlas, supporting its use for lymphoid cell identification and immune profiling.

Description

Protein Tyrosine Phosphatase Receptor Type C (PTPRC), commonly known as CD45, is a transmembrane signaling molecule expressed on nearly all nucleated hematopoietic cells, where it regulates antigen receptor signaling and immune cell activation. CD45RA Antibody for IHC is specifically optimized for detection of naÃƒÂ¯ve lymphocyte populations in formalin-fixed, paraffin-embedded tissues, enabling high-contrast visualization of lymphoid architecture and immune cell distribution in histological sections.

CD45RA antibody, also referred to as PTPRC antibody or leukocyte common antigen antibody, is widely used in immunohistochemistry as a lineage marker for hematopoietic cells, with CD45RA identifying naÃƒÂ¯ve T cells and subsets of B cells. In IHC staining, CD45RA produces strong membranous HRP-DAB brown signal in lymphocytes, clearly outlining individual immune cells within lymphoid tissues such as tonsil, lymph node, and spleen. This staining pattern enables precise identification of lymphoid follicles, germinal center organization, and interfollicular regions, while most epithelial and non-hematopoietic stromal compartments remain negative, supporting its specificity in tissue-based analysis.

Clone MSVA-472M is a recombinant mouse monoclonal antibody developed for high-affinity and reproducible detection of CD45RA in FFPE samples. This clone produces strong, well-defined membranous staining with low non-specific background under standard antigen retrieval conditions, allowing accurate identification of lymphocyte populations even in densely cellular or tumor-infiltrated tissues. In Tissue Microarray (TMA) analysis, CD45RA Antibody for IHC demonstrates highly consistent staining across large panels of normal and cancer tissues, enabling side-by-side comparison of immune cell distribution and infiltration across hundreds of tissue cores within a single experimental framework.

In normal tissue microarrays, CD45RA expression is prominently detected in lymphoid organs, including tonsil, lymph node, spleen, and thymus, where dense populations of lymphocytes exhibit strong membranous staining. The staining pattern clearly highlights lymphoid compartmentalization and immune cell localization, with scattered positive cells also observed in peripheral tissues due to circulating or resident leukocytes. Non-hematopoietic tissues, including epithelial and mesenchymal compartments, show minimal staining, reinforcing the specificity of CD45RA as a leukocyte marker in immunohistochemistry.

In cancer tissue microarrays, CD45RA Antibody for IHC robustly highlights tumor-infiltrating lymphocytes, revealing variable immune cell density and distribution across different tumor types. Lymphoid malignancies, including B-cell lymphomas, demonstrate strong and diffuse membranous staining consistent with hematopoietic origin. In solid tumors, CD45RA-positive cells are typically localized to stromal or infiltrating immune populations, providing clear contrast with tumor cells and supporting evaluation of the tumor immune microenvironment in TMA-based studies.

The robust and reproducible performance of clone MSVA-472M in TMA-based immunohistochemistry supports its application in immuno-oncology, lymphoid tissue analysis, and immune profiling studies. CD45RA Antibody for IHC enables reliable detection of hematopoietic cells in FFPE tissues and is well suited for high-throughput tissue microarray analysis, comparative pathology, and evaluation of immune infiltration patterns across normal and diseased tissues.

This antibody is also part of a broader collection of IHC antibodies validated by tissue microarray analysis, supporting consistent staining across normal and cancer tissues.

Application Notes

1. Optimal dilution of the CD45RA Antibody for IHC / PTPRC Immunohistochemistry Antibody should be determined by the researcher.

2. This PTPRC/CD45RA antibody is recombinantly produced by expression in human HEK293 cells.

3. Manual Protocol: Freshly cut sections should be used (less than 10 days between cutting and staining). Heat-induced

antigen retrieval for 5 minutes in an autoclave at 121oC in pH 7.8 Target Retrieval Solution buffer. Apply the antibody at a dilution of 1:150 at 37oC for 60 minutes. Visualization of bound antibody by the EnVision Kit (Dako, Agilent) according to the manufacturer's directions.

Immunogen

Stimulated human leukocytes were used as the immunogen for the PTPRC/CD45RA antibody.

Storage

PTPRC/CD45RA antibody with sodium azide - store at 2 to 8oC; antibody without sodium azide - store at -20 to -80oC.

Alternate Names

CD45RA IHC antibody, PTPRC immunohistochemistry antibody, Leukocyte common antigen antibody, CD45RA lymphocyte marker antibody, CD45RA TMA antibody