

CD7 Antibody for IHC / T cell antigen CD7 [clone MSVA-007R] (V6142)

Catalog No.	Formulation	Size
V6142-100UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	100 ug
V6142-20UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	20 ug

Recombinant RABBIT MONOCLONAL

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Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG, kappa
Clone Name	MSVA-007R
UniProt	P09564
Localization	Cell membrane
Applications	Immunohistochemistry (FFPE) : 1:100-1:200
Limitations	This CD7/T cell antigen CD7 antibody is available for research use only.



Immunohistochemistry analysis of CD7 Antibody for IHC in human tissue microarrays. FFPE normal and cancer tissues demonstrate strong membranous HRP-DAB brown staining in T cell-rich compartments including thymus, tonsil, spleen, and lymph node, consistent with CD7-positive lymphocytes. Most non-lymphoid tissues such as liver, kidney, pancreas, and smooth muscle show minimal to absent staining, reflecting the lineage-restricted expression pattern of CD7. In cancer panels, robust staining is observed in T cell-derived lymphomas, while the majority of non-hematologic tumors exhibit little to no specific signal. These staining patterns are consistent with publicly available expression data reported in the Human Protein Atlas. Clone MSVA-007R is a recombinant rabbit monoclonal antibody engineered for reliable detection of CD7 in formalin-fixed, paraffin-embedded human tissues.

Description

CD7 Antibody for IHC, also known as CD7 molecule antibody, recognizes Cluster of Differentiation 7, a type I transmembrane glycoprotein of the immunoglobulin superfamily expressed predominantly on thymocytes, mature T lymphocytes, and natural killer cells. CD7 is localized to the plasma membrane and functions as a co-stimulatory receptor involved in T cell activation, proliferation, and cytokine signaling. As an early and persistent marker of T cell lineage, CD7

plays a central role in thymic development and peripheral immune responses, making CD7 Antibody for IHC particularly valuable for visualizing T cell populations in formalin-fixed, paraffin-embedded tissues.

The CD7 gene is located on chromosome 17q25.2 and encodes a protein containing a single extracellular immunoglobulin-like domain, a transmembrane segment, and a short cytoplasmic tail involved in intracellular signaling pathways. Through these structural features, CD7 modulates downstream signaling events that influence lymphocyte activation and differentiation. CD7 Antibody for IHC supports investigations of thymocyte maturation, peripheral T cell maintenance, and immune cell interactions within secondary lymphoid organs such as tonsil, spleen, thymus, and lymph node.

Immunohistochemical data generated with clone MSVA-007R demonstrate strong membranous staining of T cell-rich regions in normal lymphoid tissues, including thymus, tonsil, spleen, and lymph node, consistent with the known distribution of CD7-positive T lymphocytes. Tissue microarray analysis shows minimal staining in non-lymphoid organs such as liver, kidney, pancreas, and smooth muscle, reflecting the lineage-restricted expression of CD7. In cancer tissue panels, robust staining is observed in T cell lymphomas and other T cell-derived malignancies, while most non-hematologic tumors show little to no specific signal. These findings support the specificity of CD7 Antibody for IHC in detecting T lineage cells in human tissues.

Clone MSVA-007R is a recombinant rabbit monoclonal antibody engineered for consistent detection of CD7 in immunohistochemistry-based research applications. Recombinant expression ensures defined sequence identity and reproducible performance across production lots. The antibody produces clean membranous staining of CD7-positive lymphocytes with low background in surrounding tissues, supporting reliable interpretation of T cell distribution patterns.

CD7 Antibody for IHC is particularly relevant in studies of hematologic malignancies, including T cell acute lymphoblastic leukemia and peripheral T cell lymphomas, where CD7 expression is commonly retained. By targeting a lineage-associated surface antigen expressed early in T cell development and maintained in most mature T cells, clone MSVA-007R provides a robust tool for investigating immune cell distribution, lymphoid neoplasia, and T cell-mediated immune responses.

Application Notes

1. Optimal dilution of the CD7/T cell antigen CD7 antibody should be determined by the researcher.
2. This CD7/T cell antigen CD7 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 121°C in pH 7.8 Target Retrieval Solution buffer. Apply the antibody at a dilution of 1:150 at 37°C for 60 minutes. Visualization of bound antibody by the EnVision Kit (Dako, Agilent) according to the manufacturer's directions.

Immunogen

A recombinant fragment (around amino acids 1-240) of human CD7 protein (exact sequence is proprietary) was used as the immunogen for the CD7/T cell antigen CD7 antibody.

Storage

CD7/T cell antigen CD7 antibody with sodium azide - store at 2 to 8°C; antibody without sodium azide - store at -20 to -80°C.

