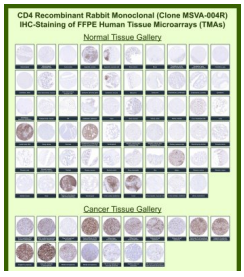
CD4 Antibody for IHC / CD4 Immunohistochemistry Antibody [clone MSVA-004R] (V6140)

Catalog No.	Formulation	Size
V6140-100UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	100 ug
V6140-20UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	20 ug

Recombinant RABBIT MONOCLONAL

Bulk quote request

Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG, kappa
Clone Name	MSVA-004R
UniProt	P01730
Localization	Cell membrane
Applications	Immunohistochemistry (FFPE): 1:100-1:200
Limitations	This CD4 / CD4 molecule antibody is available for research use only.



CD4 Antibody for IHC Tissue Microarray (TMA). Immunohistochemistry analysis of CD4 molecule / CD4 in formalin-fixed paraffin-embedded human normal and cancer tissue microarrays using recombinant rabbit monoclonal CD4 antibody. Tissue microarray (TMA) staining with HRP-DAB brown chromogen demonstrates membranous localization in CD4-positive T lymphocyte populations, with strong signal observed in lymphoid tissues and scattered immune cells across multiple organs, while non-immune cell types remain largely negative. Within tumor tissue microarrays, variable densities of CD4-positive T helper cells are detected in tumor microenvironments, including lymphomas and carcinomas, supporting evaluation of immune infiltration and tumor-associated lymphocyte populations. Evaluation across large TMA panels enables direct comparison of CD4 expression across diverse tissue types under standardized conditions. The observed staining patterns align with reported CD4 expression profiles in the Human Protein Atlas.

Description

CD4 molecule (CD4) is a cell surface glycoprotein expressed primarily on T helper lymphocytes, with additional

expression on subsets of monocytes, macrophages, and dendritic cells, where it functions as a co-receptor for antigen recognition through interaction with major histocompatibility complex class II molecules. CD4 Antibody for IHC is specifically used in immunohistochemistry to detect CD4-positive immune cells within formalin-fixed paraffin-embedded (FFPE) tissue sections, enabling visualization of lymphocyte distribution within intact tissue architecture.

CD4 antibody, also known as T helper cell marker antibody or CD4 surface receptor antibody, is a central tool for immunohistochemistry-based evaluation of immune cell localization. CD4 Antibody for IHC allows identification of CD4-positive T helper lymphocytes within tissue compartments, including lymphoid structures, epithelial-associated immune infiltrates, and stromal regions. In FFPE tissues, this staining provides critical spatial context, allowing researchers and pathologists to assess how CD4-positive cells are organized within normal tissues and sites of inflammation.

This CD4 Antibody for IHC (clone MSVA-004R) has been extensively evaluated using human tissue microarrays (TMA), enabling systematic analysis of CD4-positive cell distribution across a wide range of normal and cancer tissues under standardized staining conditions. TMA-based immunohistochemistry is particularly valuable for comparing staining patterns across multiple tissue types in a single experiment, and CD4 Antibody for IHC demonstrates staining patterns that align with expected immune localization, including strong enrichment of CD4-positive lymphocytes in lymphoid tissues such as tonsil and spleen, as well as variable presence in peripheral organs.

In the context of tumor biology, CD4 Antibody for IHC is highly informative for evaluating the immune microenvironment. Immunohistochemistry staining reveals CD4-positive T helper cells within tumor stroma, at invasive tumor margins, and in some cases within tumor cell nests, reflecting the complexity of tumor-immune interactions. TMA analysis highlights significant variability in CD4-positive cell density across different tumor types, including lymphomas and carcinomas, supporting comparative assessment of immune infiltration patterns. CD4 Antibody for IHC is therefore widely used in studies examining tumor-associated lymphocytes and immune response within the tumor microenvironment.

CD4 is localized to the plasma membrane of immune cells, and in immunohistochemistry, CD4 Antibody for IHC produces a predominantly membranous staining pattern that enables clear visualization of individual lymphocytes within tissue sections. This distinct staining pattern supports accurate identification of CD4-positive cells against surrounding epithelial, stromal, and vascular structures. A recombinant rabbit monoclonal CD4 antibody such as clone MSVA-004R can be used in immunohistochemistry to support detection of CD4-expressing immune cells, enabling detailed analysis of tissue-resident lymphocyte populations and immune architecture in both normal and disease settings.

A full range of CD4 antibody reagents for immunohistochemistry, western blot, and flow cytometry is available on our CD4 Antibody collection page.

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 CD4 Antibody for IHC / CD4 Immunohistochemistry Antibody should be determined by the researcher.

2. This CD4 / CD4 molecule 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

A recombinant fragment (around amino acids 216-396) of human CD4 protein (exact sequence is proprietary) was used as the immunogen for the CD4 Antibody for IHC / CD4 Immunohistochemistry Antibody.

Storage

CD4 / CD4 molecule antibody with sodium azide - store at 2 to 8oC; antibody without sodium azide - store at -20 to -80oC.

Alternate Names

CD4 IHC antibody, CD4 tissue staining antibody, CD4 tumor microenvironment antibody, CD4 lymphocyte marker IHC antibody

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