

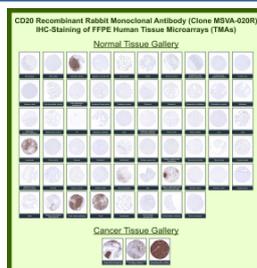
MS4A1 Antibody for IHC / CD20 [clone MSVA-020R] (V6037)

Catalog No.	Formulation	Size
V6037-100UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	100 ug
V6037-20UG	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-020R
UniProt	P11836
Localization	Cell membrane
Applications	Immunohistochemistry (FFPE) : 1:100-1:200
Limitations	This MS4A1/CD20 antibody is available for research use only.



Immunohistochemistry analysis of MS4A1 Antibody for IHC in human tissue microarrays. Recombinant rabbit monoclonal antibody (clone MSVA-020R) demonstrates strong membranous HRP-DAB brown staining in B-cell rich tissues including tonsil, lymph node, and spleen, consistent with CD20/MS4A1 surface expression, while most non-lymphoid tissues show minimal or absent staining. In cancer tissues, diffuse membranous staining is observed in B-cell lymphomas, supporting lineage-specific expression. The observed staining distribution across normal and malignant samples aligns with published MS4A1 expression patterns reported in the Human Protein Atlas.

Description

MS4A1 antibody recognizes Membrane spanning 4-domains subfamily A member 1, commonly known as CD20, a B-cell specific transmembrane phosphoprotein encoded by the MS4A1 gene. CD20 is localized to the plasma membrane of B lymphocytes, where it regulates B-cell activation, proliferation, and calcium signaling. MS4A1 Antibody for IHC is optimized for immunohistochemical detection of CD20 expression in formalin-fixed, paraffin-embedded tissues for research applications focused on lymphoma biology and immune cell profiling.

The MS4A1 gene is located on chromosome 11q12.2 and encodes a protein characterized by four transmembrane

domains with short cytoplasmic N- and C-terminal regions. CD20 expression begins at the late pre-B-cell stage and persists through mature B cells but is absent on hematopoietic stem cells and terminally differentiated plasma cells. This restricted lineage expression makes CD20 one of the most widely used markers for identifying B-cell populations in lymphoid tissues such as tonsil, lymph node, spleen, and bone marrow.

Functionally, CD20 associates with the B-cell receptor signaling complex and contributes to calcium influx following antigen stimulation. Although CD20 lacks a defined soluble ligand, it participates in membrane microdomains that regulate signal transduction and B-cell activation. Aberrant CD20 expression is characteristic of B-cell non-Hodgkin lymphoma, diffuse large B-cell lymphoma, follicular lymphoma, and chronic lymphocytic leukemia. MS4A1 Antibody for IHC supports evaluation of CD20 distribution and membranous staining patterns in both normal and malignant tissues.

Immunohistochemical assessment of CD20 is widely used in research classification of lymphoid neoplasms and in studies investigating tumor microenvironment composition. Clear membranous staining helps distinguish B-cell lineage from T-cell or non-lymphoid populations within complex tissue architecture. Clone MSVA-020R is engineered as a recombinant rabbit monoclonal antibody to provide consistent specificity and reproducibility in tissue-based detection of CD20.

By targeting a well-established B-cell surface antigen, MS4A1 Antibody for IHC provides a reliable tool for examining B-cell localization, lymphoma pathology, and immune architecture in translational and basic research settings.

Application Notes

1. Optimal dilution of the MS4A1/CD20 antibody should be determined by the researcher.
2. This MS4A1/CD20 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

Recombinant human full-length MS4A1 protein was used as the immunogen for the MS4A1/CD20 antibody.

Storage

MS4A1/CD20 antibody with sodium azide - store at 2 to 8°C; antibody without sodium azide - store at -20 to -80°C.