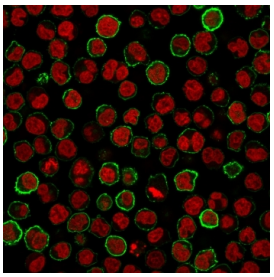
CD20 Antibody for IHC [clone MS4A1/3411] (V7618)

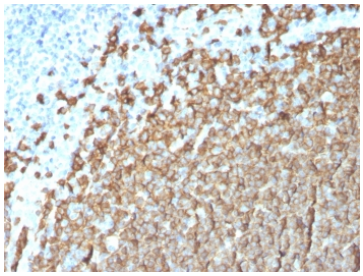
Catalog No.	Formulation	Size
V7618-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V7618-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V7618SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V7618IHC-7ML	Prediluted 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

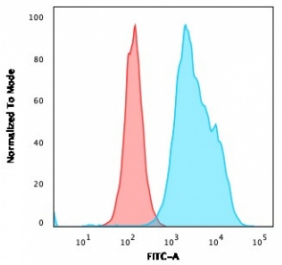
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2b, kappa
Clone Name	MS4A1/3411
Purity	Protein G affinity chromatography
UniProt	P11836
Localization	Predominantly cell surface with some cytoplasmic
Applications	ELISA : 2-4ug/ml (order BSA/azide-free format) Western Blot : 1-2ug/ml Flow Cytometry : 1-2ug/10^6 cells Immunofluorescence : 1-2ug/ml Immunohistochemistry (FFPE) : 0.5-1ug/ml for 30 min at RT
Limitations	This CD20 antibody is available for research use only.



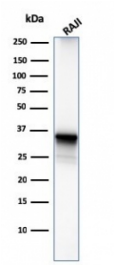
Immunofluorescence analysis of CD20 Antibody for IHC in human Raji cells. CD20 antibody (clone MS4A1/3411) demonstrates distinct green membranous staining outlining the surface of CD20-positive B cells, consistent with MS4A1 localization at the plasma membrane, while nuclei are counterstained red with Reddot. The staining pattern highlights strong cell surface expression with minimal cytoplasmic background, supporting specific detection of CD20 in this B-cell derived line.



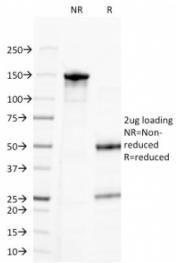
Immunohistochemistry analysis of CD20 Antibody for IHC in human tonsil tissue. FFPE human tonsil demonstrates strong membranous HRP-DAB brown staining in B lymphocytes within germinal centers and follicular regions, consistent with CD20/MS4A1 surface expression, while interfollicular areas show comparatively reduced staining. Antigen retrieval was performed by boiling tissue sections in pH 6 10mM citrate buffer for 10-20 minutes followed by cooling prior to incubation with CD20 antibody (clone MS4A1/3411).



Flow cytometry testing of human Raji cells with CD20 antibody (clone MS4A1/3411); Red=isotype control, Blue= CD20 antibody.



Western blot testing of human Raji lysate with CD20 antibody (clone MS4A1/3411). Predicted molecular weight ~33 kDa.



SDS-PAGE analysis of purified, BSA-free CD20 antibody (clone MS4A1/3411) as confirmation of integrity and purity.

Description

CD20 antibody recognizes CD20, also known as Membrane spanning 4-domains subfamily A member 1, 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. CD20 Antibody for IHC is optimized for detecting 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 cytoplasmic N- and C-terminal regions. CD20 expression begins at the late pre-B-cell stage and continues

through mature B cells but is absent on hematopoietic stem cells and terminally differentiated plasma cells. This lineage-restricted expression makes CD20 one of the most widely used markers for identifying B-cell populations in lymphoid tissues such as tonsil, lymph node, and spleen.

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. CD20 Antibody for IHC supports evaluation of CD20 distribution and density in both normal and malignant tissues.

Immunohistochemical detection of CD20 is widely used in research classification of lymphoid neoplasms and in studies investigating tumor microenvironment composition. Assessment of membranous CD20 staining patterns helps distinguish B-cell lineage from T-cell or non-lymphoid populations. Clone MS4A1/3411 is engineered to provide consistent performance and clear membranous staining in tissue sections.

By targeting a well-established B-cell surface antigen, CD20 Antibody for IHC provides a reliable tool for examining B-cell localization, lymphoma pathology, and immune architecture in research settings.

Application Notes

The concentration stated for each application is a general starting point. Variations in protocols, secondaries and substrates may require the CD20 antibody to be titered up or down for optimal performance.

1. 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

Amino acids 213-297 from the human protein were used as the immunogen for this CD20 antibody.

Storage

CD20 antibody with azide can be stored at 2-8oC. The azide-free format should be aliquoted and stored at -20oC or colder.