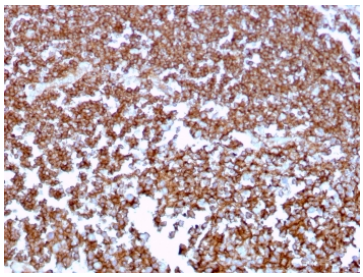
CD20 Antibody MS4A1/3409 / CD20 Mouse Monoclonal Antibody [clone MS4A1/3409] (V7636)

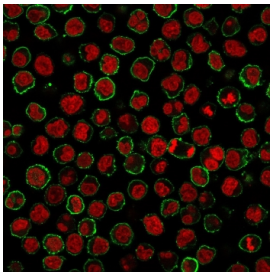
Catalog No.	Formulation	Size
V7636-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V7636-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V7636SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V7636IHC-7ML	Prediluted 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

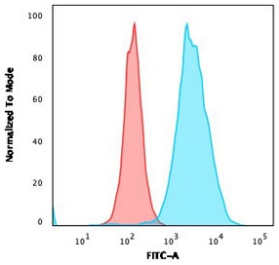
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2b, kappa
Clone Name	MS4A1/3409
Purity	Protein G affinity chromatography
UniProt	P11836
Localization	Predominantly cell surface with some cytoplasmic
Applications	ELISA: 2-4ug/ml (order BSA/azide-free format) Flow cytometry: 1-2ug/10^6 cells Immunofluorescence: 1-2ug/ml Western blot: 1-2ug/ml Immunohistochemistry (FFPE): 0.5-1ug/ml for 30 min at RT
Limitations	This CD20 Antibody MS4A1/3409 / CD20 Mouse Monoclonal Antibody is available for research use only.



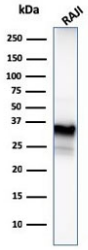
CD20 Antibody MS4A1/3409 IHC Staining of Human Tonsil Tissue. Immunohistochemical analysis of FFPE human tonsil tissue using CD20 Mouse Monoclonal Antibody clone MS4A1/3409. Strong brown DAB staining is observed in numerous lymphoid cells, consistent with the expected distribution of CD20-positive B cells. Heat-induced epitope retrieval was performed in 10 mM citrate buffer (pH 6) for 10-20 minutes.



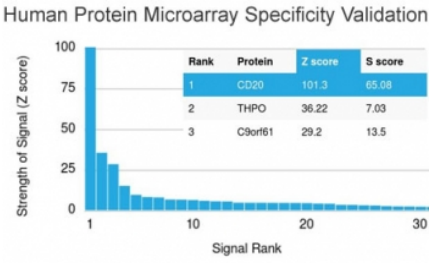
CD20 Antibody MS4A1/3409 IF Staining of Human Raji Cells. Immunofluorescence analysis of human Raji cells using CD20 Mouse Monoclonal Antibody clone MS4A1/3409. Green CD20 staining is concentrated along the cell periphery, consistent with membrane localization. RedDot nuclear staining is shown in red.



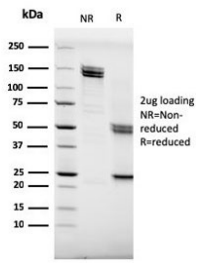
CD20 Antibody MS4A1/3409 FACS Analysis of Human Raji Cells. Flow cytometry analysis of human Raji cells using CD20 Mouse Monoclonal Antibody clone MS4A1/3409. The blue histogram represents CD20 antibody staining, while the red histogram represents the isotype control. A clear rightward fluorescence shift is observed in the antibody-stained population.



CD20 Antibody MS4A1/3409 WB Analysis of Human Raji Cell Lysate. Western blot analysis of human Raji cell lysate using CD20 Mouse Monoclonal Antibody clone MS4A1/3409. A prominent immunoreactive band is detected near 33-37 kDa, consistent with the expected molecular weight of CD20.



CD20 Antibody MS4A1/3409 HuProt Human Protein Microarray Specificity Analysis. CD20 Mouse Monoclonal Antibody clone MS4A1/3409 was evaluated using a HuProt microarray containing more than 19,000 full-length human proteins. CD20 produces the highest-ranked binding signal, with substantially lower signals for the remaining proteins shown. Z-scores indicate relative signal strength, while S-scores describe separation between ranked signals.



CD20 Antibody MS4A1/3409 SDS-PAGE Analysis of Purified Antibody. SDS-PAGE analysis of purified, BSA-free CD20 Mouse Monoclonal Antibody clone MS4A1/3409 under non-reducing (NR) and reducing (R) conditions. The non-reduced sample shows an intact antibody band, while the reduced sample shows separated heavy and light chains, supporting antibody integrity and purity.

Description

CD20 Antibody MS4A1/3409 / CD20 Mouse Monoclonal Antibody targets CD20, a membrane-associated protein encoded by the MS4A1 gene. CD20 is a member of the membrane-spanning 4A protein family and is predominantly expressed during B-cell differentiation, beginning at the late precursor stage and continuing through mature B lymphocytes. Its expression generally declines as B cells undergo terminal differentiation into plasma cells. This characteristic distribution makes CD20 an important marker for studying B-cell development, immune responses, and lymphoid malignancies.

CD20 is a nonglycosylated phosphoprotein with an apparent molecular weight of approximately 33-37 kDa. Its structure includes four transmembrane domains, intracellular N- and C-terminal regions, and two extracellular loops. The larger extracellular loop contains epitopes recognized by several therapeutic antibodies. Unlike conventional signaling receptors, CD20 lacks intrinsic kinase activity and does not have a well-established physiological ligand. Instead, it contributes to membrane-associated signaling processes that influence B-cell activation and function.

Research has linked CD20 to the regulation of intracellular calcium homeostasis and signaling downstream of the B-cell antigen receptor. CD20 associates with membrane protein complexes that influence calcium responses following receptor stimulation. These interactions may affect cellular activation, proliferation, and differentiation. Although its precise physiological role remains incompletely defined, CD20 contributes to the coordinated signaling mechanisms that regulate B-cell responses to antigenic stimulation.

CD20 is extensively studied in B-cell malignancies, including follicular lymphoma, diffuse large B-cell lymphoma, and chronic lymphocytic leukemia. Its expression provides an important means of identifying B-cell populations and characterizing lymphoid neoplasms. CD20 is also a major therapeutic target, with monoclonal antibodies such as rituximab and obinutuzumab used to deplete CD20-expressing B cells. Variations in antigen expression and accessibility can influence recognition by therapeutic antibodies and contribute to differences in treatment response.

CD20 Antibody MS4A1/3409 supports investigations into CD20 expression, B-cell identity, and membrane-associated immune signaling. Characterizing CD20 distribution and abundance can provide insight into normal lymphocyte differentiation, malignant B-cell populations, and the biological mechanisms underlying CD20-directed therapies.

For additional CD20 research, explore our CD20 Antibody rIGEL/773, a recombinant monoclonal antibody supported by Western blot, immunohistochemistry, immunofluorescence, flow cytometry, and human protein microarray data.

Application Notes

The concentration stated for each application is a general starting point. Variations in protocols, secondaries and substrates may require the CD20 Antibody MS4A1/3409 / CD20 Mouse Monoclonal 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.

Alternate Names

B-lymphocyte antigen CD20 antibody, B-cell surface antigen B1 antibody, B1 antigen antibody, Membrane-spanning 4-domains subfamily A member 1 antibody, MS4A1 antibody, B-lymphocyte surface antigen B1 antibody, CD20 antigen antibody, CD20 molecule antibody

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