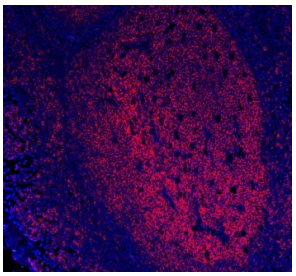
MS4A1 Antibody / CD20 Monoclonal Antibody [clone 4I11] (RQ6739)

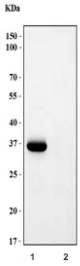
Catalog No.	Formulation	Size
RQ6739	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2a
Clone Name	4I11
Purity	Affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	P11836
Localization	Predominantly cell surface with some cytoplasmic
Applications	Western blot: 1-2ug/ml Immunofluorescence (FFPE): 5ug/ml
Limitations	This MS4A1 Antibody / CD20 Monoclonal Antibody is available for research use only.



MS4A1 Antibody IF Staining of Human Tonsil Tissue. Immunofluorescence analysis of FFPE human tonsil tissue using CD20 Monoclonal Antibody clone 4I11. Red fluorescence is observed in lymphoid tissue regions, with blue DAPI nuclear counterstaining. Heat-induced epitope retrieval was performed by steaming sections in citrate buffer (pH 6) for 20 minutes.



MS4A1 Antibody WB Analysis of Human Raji and Jurkat Cell Lysates. Western blot analysis of human Raji (lane 1) and Jurkat (lane 2) cell lysates using CD20 Monoclonal Antibody clone 4I11. A prominent immunoreactive band is detected near 33-37 kDa in Raji lysate, consistent with the expected molecular weight of CD20. No corresponding prominent band is observed in Jurkat lysate.

Description

MS4A1 Antibody / CD20 Monoclonal Antibody targets MS4A1, the gene encoding CD20, a membrane-associated phosphoprotein that serves as an important marker of B-cell differentiation and identity. CD20 belongs to the membrane-spanning 4A protein family and is expressed predominantly from the late stages of B-cell precursor development through mature B lymphocytes. Its expression generally declines as activated B cells differentiate into antibody-secreting plasma cells. This characteristic distribution makes MS4A1 an important molecular marker for investigating lymphocyte development, immune regulation, and B-cell malignancies.

CD20 is a nonglycosylated protein with an apparent molecular weight of approximately 33-37 kDa. Its structure consists of four transmembrane domains, intracellular N- and C-terminal regions, and two extracellular loops. The larger extracellular loop contains epitopes recognized by several therapeutic monoclonal antibodies. Unlike conventional cell-surface receptors, CD20 lacks intrinsic enzymatic activity and has no firmly established physiological ligand. Instead, its biological functions are associated with membrane organization, calcium homeostasis, and interactions with signaling proteins involved in B-cell activation.

Research has linked MS4A1 expression to the regulation of intracellular calcium signaling and responses initiated through the B-cell antigen receptor. CD20 influences calcium mobilization following antigen receptor stimulation and may contribute to the coordination of cellular activation, proliferation, and differentiation. Its interactions with neighboring membrane proteins and signaling complexes help regulate responses to extracellular stimulation. Although the precise physiological function of CD20 remains incompletely understood, studies involving altered MS4A1 expression have provided insight into its contribution to normal B-cell signaling and immune function.

MS4A1 is widely investigated in hematologic malignancies, including follicular lymphoma, diffuse large B-cell lymphoma, and chronic lymphocytic leukemia. CD20 expression is an established feature of many mature B-cell neoplasms and provides an important molecular target for therapeutic antibodies. CD20-directed treatments, including rituximab and obinutuzumab, are used to deplete B-cell populations in selected malignant and autoimmune conditions. Differences in receptor abundance, membrane organization, and epitope accessibility can influence antibody recognition and therapeutic responses.

MS4A1 Antibody supports investigations into CD20 expression and its relationship to B-cell differentiation, immune signaling, and lymphoid tissue organization. Understanding how MS4A1 expression changes during lymphocyte maturation and disease progression may help clarify mechanisms governing B-cell identity, immune dysfunction, and responses to CD20-targeted 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

Optimal dilution of the MS4A1 Antibody / CD20 Monoclonal Antibody should be determined by the researcher.

Immunogen

Recombinant human protein (amino acids M1-P297) was used as the immunogen for the MS4A1 antibody.

Storage

After reconstitution, the MS4A1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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, B-lymphocyte surface antigen B1 antibody, CD20 antigen antibody, CD20 molecule antibody, MS4A1 antibody

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