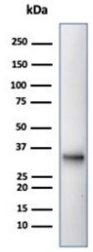
CD20 Antibody MS4A1/4655 / Protein Microarray Validated [clone MS4A1/4655] (V9456)

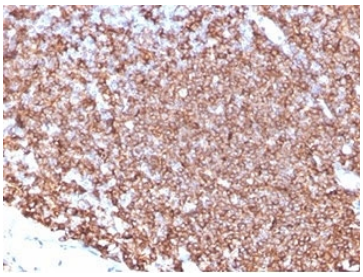
Catalog No.	Formulation	Size
V9456-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V9456-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V9456SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

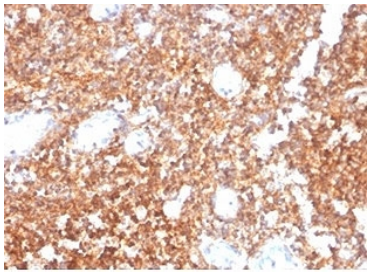
Availability	1-3 business days
Species Reactivity	Human, Mouse and Rat
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	MS4A1/4655
Purity	Protein A affinity
UniProt	P11836
Localization	Cell Surface
Applications	Western blot: 1-2ug/ml Immunohistochemistry (FFPE): 1-2ug/ml
Limitations	This CD20 Antibody MS4A1/4655 is available for research use only.



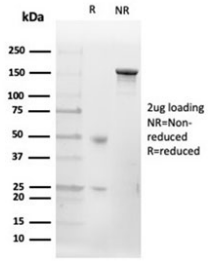
CD20 Antibody MS4A1/4655 WB. Western blot testing of human Raji cell lysate with CD20 antibody (clone MS4A1/4655). Predicted molecular weight ~33 kDa.



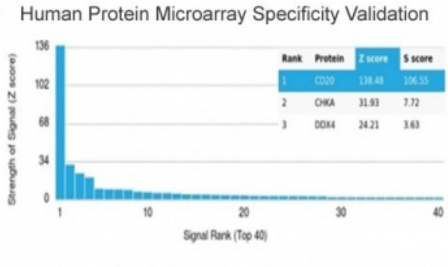
CD20 Antibody MS4A1/4655 IHC. Immunohistochemistry analysis of CD20 Antibody Protein Microarray Validated in human tonsil tissue. FFPE human tonsil demonstrates strong membranous HRP-DAB brown staining in B lymphocytes within germinal centers and follicular regions, consistent with CD20/MS4A1 surface expression, while adjacent non-B-cell areas show minimal staining. Antigen retrieval was performed by boiling tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 minutes followed by cooling prior to incubation with CD20 antibody (clone MS4A1/4655).



IHC staining of FFPE human tonsil tissue with CD20 antibody (clone MS4A1/4655). HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.



SDS-PAGE analysis of purified, BSA-free CD20 antibody (clone MS4A1/4655) as confirmation of integrity and purity.



Analysis of HuProt(TM) microarray containing more than 19,000 full-length human proteins using CD20 antibody (clone MS4A1/4655). These results demonstrate the foremost specificity of the MS4A1/4655 mAb. Z- and S- score: The Z-score represents the strength of a signal that an antibody (in combination with a fluorescently-tagged anti-IgG secondary Ab) produces when binding to a particular protein on the HuProt(TM) array. Z-scores are described in units of standard deviations (SD's) above the mean value of all signals generated on that array. If the targets on the HuProt(TM) are arranged in descending order of the Z-score, the S-score is the difference (also in units of SD's) between the Z-scores. The S-score therefore represents the relative target specificity of an Ab to its intended target.

Description

CD20 Antibody MS4A1/4655 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 Protein Microarray Validated is developed to support research in B-cell immunology, lymphoma biology, and antibody specificity assessment.

The MS4A1 gene, located on chromosome 11q12.2, encodes a protein containing 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 plasma cells. This lineage-restricted expression pattern makes CD20 one of the most widely used markers for identifying B-cell populations in lymphoid tissues such as tonsil, spleen, and lymph node.

Functionally, CD20 is associated with the B-cell receptor 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. Dysregulated CD20 expression is observed in B-cell non-Hodgkin lymphoma, chronic lymphocytic leukemia, and other lymphoproliferative disorders. CD20 antibody supports detailed evaluation of CD20 expression in both normal and malignant B-cell populations.

CD20 is also a major therapeutic target in oncology and autoimmune disease. Monoclonal antibodies directed against CD20 are widely used to induce B-cell depletion through complement activation, antibody-dependent cellular cytotoxicity, and apoptotic mechanisms. Investigation of CD20 expression levels and antigen modulation remains important for understanding treatment response and resistance.

This clone (MS4A1/4655) has been validated using a high-density protein microarray platform to assess specificity against a broad panel of human proteins. Protein microarray validation supports confidence in selective CD20 recognition and minimizes risk of off-target binding in research applications. CD20 Antibody Protein Microarray Validated provides a robust reagent for studies requiring high specificity in translational and basic immunology research.

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 CD20 Antibody MS4A1/4655 should be determined by the researcher.

Immunogen

A portion of amino acids 266-297 from the cytoplasmic domain was used as the immunogen for the CD20 antibody.

Storage

Aliquot the CD20 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

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