CD20 Antibody B9E9 / MS4A1 Monoclonal Antibody [clone B9E9] (V2048)

Catalog No.	Formulation	Size
V2048-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V2048-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V2048SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Citations (5)

Bulk quote request

Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2a, kappa
Clone Name	B9E9
Purity	Protein G affinity chromatography
Buffer	1X PBS, pH 7.4
Gene ID	931
Localization	Predominantly cell surface with some cytoplasmic
Applications	Functional studies (order BSA/sodium azide-free format) Flow cytometry: 0.5-1ug/10^6 cells Immunofluorescence: 0.5-1ug/ml
Limitations	This CD20 Antibody B9E9 / MS4A1 Monoclonal Antibody is available for research use only.



Description

CD20 Antibody B9E9 / MS4A1 Monoclonal Antibody recognizes CD20, a membrane-associated protein encoded by the MS4A1 gene and expressed primarily during B-cell development and maturation. CD20 is a member of the membrane-spanning 4A (MS4A) protein family and is commonly referred to as B-lymphocyte antigen CD20 or Bp35. The protein has an apparent molecular weight of approximately 33-37 kDa and functions as an important component of B-cell membrane organization and signaling. CD20 expression begins during early B-cell differentiation, persists through mature B-cell stages, and is generally lost as B cells differentiate into antibody-secreting plasma cells.

CD20 contains four transmembrane segments, with its N- and C-terminal regions located intracellularly. Two extracellular loops connect the membrane-spanning regions, including a larger extracellular loop that contains epitopes recognized by several established CD20 antibodies. Clone B9E9 recognizes an extracellular CD20 epitope reported to be similar or identical to those recognized by the Leu-16 and B1 antibodies. This extracellular accessibility distinguishes B9E9 from antibodies directed against intracellular CD20 sequences and is relevant to studies involving intact B-cell membranes and surface antigen recognition.

Although CD20 does not contain a conventional signaling domain, it participates in the regulation of B-cell activation and calcium-dependent signaling. CD20 associates with membrane protein complexes and influences calcium responses following B-cell receptor stimulation. Its activity is also influenced by membrane organization and interactions with neighboring proteins. CD20 is generally considered a nonglycosylated protein, while phosphorylation of intracellular regions has been associated with changes in B-cell activation. These properties contribute to its role in coordinating membrane-associated events during B-cell development and immune responses.

CD20 is widely studied as a marker of B-cell lineage and as a therapeutic target in B-cell malignancies and autoimmune disorders. Its expression is characteristic of many mature B-cell lymphomas and leukemias, although antigen levels can vary among disease subtypes and individual cell populations. Changes in CD20 expression or accessibility can influence recognition by CD20-directed antibodies. The extracellular epitope specificity of CD20 Antibody B9E9 makes this clone particularly relevant to investigations of surface CD20 expression, B-cell identification, antigen accessibility, and the biological consequences of CD20 engagement.

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 B9E9 / MS4A1 Monoclonal Antibody to be titered up or down for optimal performance.

Immunogen

The lymphoblastoid cell line Daudi was used as the immunogen for this CD20 Antibody B9E9.

Storage

Store the CD20 Antibody B9E9 at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

MS4A1 antibody, B-lymphocyte antigen CD20 antibody, B-lymphocyte cell-surface antigen B1 antibody, Bp35 antibody, Leukocyte surface antigen Leu-16 antibody, Membrane-spanning 4-domains subfamily A member 1 antibody, CD20 B-cell marker antibody

References (4)

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