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CD20 / MS4A1 (B-Cell Marker) Antibody - With BSA and Azide

Mouse Monoclonal Antibody [Clone 109-3C2]
Catalog # AH12671

Product Information

Application	IF, FC
Primary Accession	P11836
Other Accession	931, 712553
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgG3, kappa
Clone Names	109-3C2
Calculated MW	33077

Additional Information

Gene ID	931
Other Names	B-lymphocyte antigen CD20, B-lymphocyte surface antigen B1, Bp35, Leukocyte surface antigen Leu-16, Membrane-spanning 4-domains subfamily A member 1, CD20, MS4A1, CD20
Application Note	IF~~1:50~200 FC~~1:10~50
Storage	Store at 2 to 8°C.Antibody is stable for 24 months.
Precautions	CD20 / MS4A1 (B-Cell Marker) Antibody - With BSA and Azide is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	MS4A1
Synonyms	CD20
Function	B-lymphocyte-specific membrane protein that plays a role in the regulation of cellular calcium influx necessary for the development, differentiation, and activation of B-lymphocytes (PubMed:12920111, PubMed:3925015, PubMed:7684739). Functions as a store-operated calcium (SOC) channel component promoting calcium influx after activation by the B-cell receptor/BCR (PubMed:12920111, PubMed:18474602, PubMed:7684739).
Cellular Location	Cell membrane; Multi-pass membrane protein. Cell membrane; Lipid-anchor. Note=Constitutively associated with membrane rafts.

Tissue Location	Expressed on B-cells.

Background

Recognizes a protein of 30-33kDa, which is identified as CD20 (Workshop V; Code CD20.12. Workshop IV; Code B17). It recognizes an extracellular domain of CD20. It is a non-Ig differentiation antigen of B-cells and its expression is restricted to normal and neoplastic B-cells, being absent from all other leukocytes and tissues. CD20 is expressed by pre B-cells and persists during all stages of B-cell maturation but is lost upon terminal differentiation into plasma cells. The protein passes through the membrane 4 times with both ends in cytoplasm and exposes one short and one longer loop to the external environment. CD20 is not glycosylated in resting B-cells and its cytoplasmic domains are differentially phosphorylated upon activation. It acts as calcium channel involved in B cell activation and cell cycle progression.

References

Schlossman S, et al. (eds). Leukocyte Typing V, Oxford University Press, Oxford, p511-515, 1995. | Knapp W et al. (eds) Leukocytes Typing IV, Oxford University Press, Oxford, p51, 1989. | Tedder TF and Schlossman SF. Phosphorylation of the B1 (CD20) molecule by normal and malignant human B-lymphocytes. J Biol Chem 1988, 263(20):10009-10015. | Bubien JK et al. Transfection of the CD20 cell surface molecule into ectopic cell types generates a Ca2+ conductance found constitutively in B-lymphocytes. J Cell Biol 1993, 121(5):1121-1132. | Tedder TF and Engel P. CD20: a regulator of cell-cycle progression of B-lymphocytes. Immunol Today 1994, 15(9):450-454. | Kanzaki M et al. Expression of calcium-permeable cation channel CD20 accelerates progression through the G1 phase in Balb/c 3T3 cells. J Biol Chem 1995, 270(22):13099-13104

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.