

Anti-CD20 Picoband Antibody

Catalog # ABO11771

Product Information

Application	WB, IHC-P, IHC-F, FC, ICC
Primary Accession	P11836
Host	Rabbit
Reactivity	Human
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for B-lymphocyte antigen CD20(MS4A1) detection. Tested with WB, IHC-P, IHC-F, ICC, FCM in Human.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

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
Calculated MW	33077
Application Details	Immunohistochemistry(Paraffin-embedded Section), 0.5-1 μ g/ml, By Heat Immunohistochemistry(Frozen Section), 0.5-1 μ g/ml Immunocytochemistry, 0.5-1 μ g/ml Western blot, 0.1-0.5 μ g/ml Flow Cytometry, 1-3 μ g/1x10 ⁶ cells
Subcellular Localization	Cell membrane ; Multi-pass membrane protein . Cell membrane ; Lipid-anchor .
Tissue Specificity	Expressed on B-cells.
Source	Eukaryota
Protein Name	B-lymphocyte antigen CD20
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg NaN ₃ .
Immunogen	E.coli-derived human CD20 recombinant protein (Position: M1-D261). Human CD20 shares 75% amino acid (aa) sequence identity with mouse CD20.
Purification	Immunogen affinity purified.

Cross Reactivity	No cross reactivity with other proteins
Storage	At -20 °C for one year. After r ° Constitution, at 4 °C for one month. It ° Can also be aliquotted and stored frozen at -20 °C for a longer time.Avoid repeated freezing and thawing.
Sequence Similarities	Belongs to the MS4A family.

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

CD20, also known as MS4A1, is an activated-glycosylated phosphoprotein expressed on the surface of all B-cells beginning at the pro-B phase (CD45R+, CD117+) and progressively increasing in concentration until maturity. It is mapped to 11q12.2. This gene encodes a member of the membrane-spanning 4A gene family. The function of CD20 is to enable optimal B-cell immune response, specifically against T-independent antigens. It is suspected that CD20 acts as a calcium channel in the cell membrane. What €™s more, this protein may be involved in the regulation of B-cell activation and proliferation.

Images

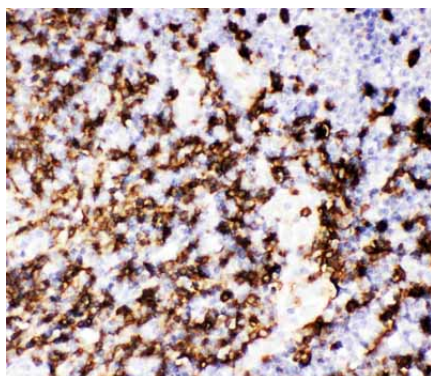
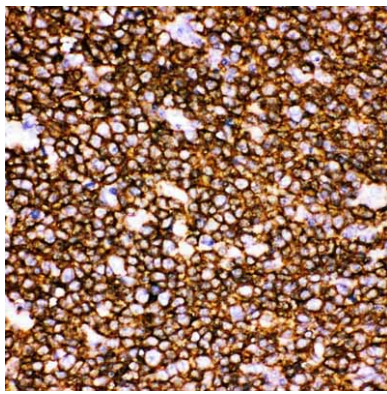


Figure 1. IHC analysis of CD20 using anti-CD20 antibody (ABO11771).CD20 was detected in paraffin-embedded section of Human Tonsil Tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 µg/ml rabbit anti-CD20 Antibody (ABO11771) overnight at 4 °C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 °C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.

Figure 2. IHC analysis of CD20 using anti-CD20 antibody (ABO11771).CD20 was detected in paraffin-embedded section of Human Tonsil Tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was



then incubated with 1 μ g/ml rabbit anti-CD20 Antibody (ABO11771) overnight at 4 $^{\circ}$ C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 $^{\circ}$ C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.

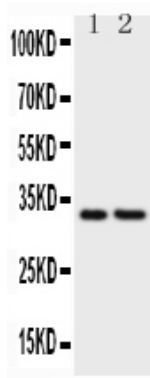


Figure 3. Western blot analysis of CD20 using anti-CD20 antibody (ABO11771). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: RAJI Whole Cell Lysate Lane 2: CEM Whole Cell Lysate After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-CD20 antigen affinity purified polyclonal antibody (Catalog # ABO11771) at 0.5 μ g/mL overnight at 4 $^{\circ}$ C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for CD20 at approximately 33KD. The expected band size for CD20 is at 33KD.

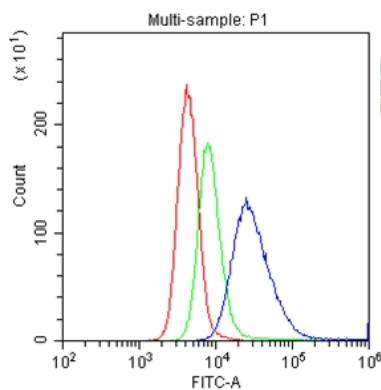


Figure 4. Flow Cytometry analysis of U937 cells using anti-CD20 antibody (ABO11771). Overlay histogram showing U937 cells stained with ABO11771 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-CD20 Antibody (ABO11771, 1 μ g/1x10⁶ cells) for 30 min at 20 $^{\circ}$ C. DyLight²488 conjugated goat anti-rabbit IgG (BA1127, 5-10 μ g/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20 $^{\circ}$ C. Isotype control antibody (Green line) was rabbit IgG (1 μ g/1x10⁶) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

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