

Anti-CD20 Picoband Antibody
Catalog # ABO11771

Specification

Anti-CD20 Picoband Antibody - Product Information

Application	IHC, WB, FC
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.

Anti-CD20 Picoband Antibody - 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 MW KDa

Application Details

Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, By Heat
Immunohistochemistry(Frozen Section), 0.5-1 µg/ml

Immunocytochemistry, 0.5-1 µg/ml
Western blot, 0.1-0.5 µg/ml
Flow Cytometry, 1-3¹/₄g/1x10⁶cells

Subcellular Localization

Cell membrane ; Multi-pass membrane protein . Cell membrane ; Lipid-anchor .

Tissue Specificity

Expressed on B-cells.

Protein Name

B-lymphocyte antigen CD20

Contents

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na₂HPO₄, 0.05mg Na₃.

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 reconstitution, 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.

Anti-CD20 Picoband Antibody - 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](http://www.uniprot.org/citations/12920111), PubMed: [3925015](http://www.uniprot.org/citations/3925015), PubMed: [7684739](http://www.uniprot.org/citations/7684739)). Functions as a store-operated calcium (SOC) channel component promoting calcium influx after activation by the B-cell receptor/BCR (PubMed: [12920111](http://www.uniprot.org/citations/12920111), PubMed: [18474602](http://www.uniprot.org/citations/18474602), PubMed: [7684739](http://www.uniprot.org/citations/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.

Anti-CD20 Picoband Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Anti-CD20 Picoband Antibody - Images

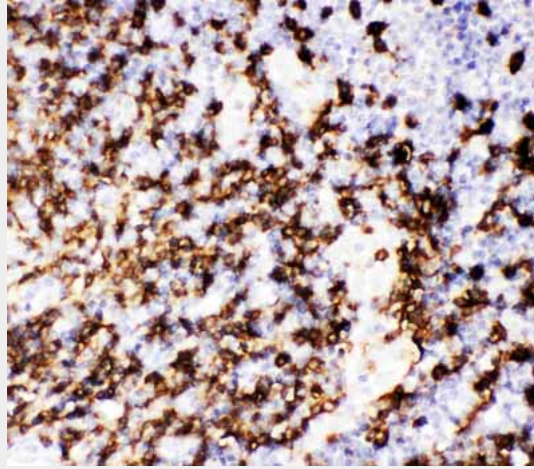


Figure 1. IHC analysis of CD20 using anti-CD20 antibody (ABO11771).CD20 was detected in paraffin-embedded section of Human Tonsil Tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 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.

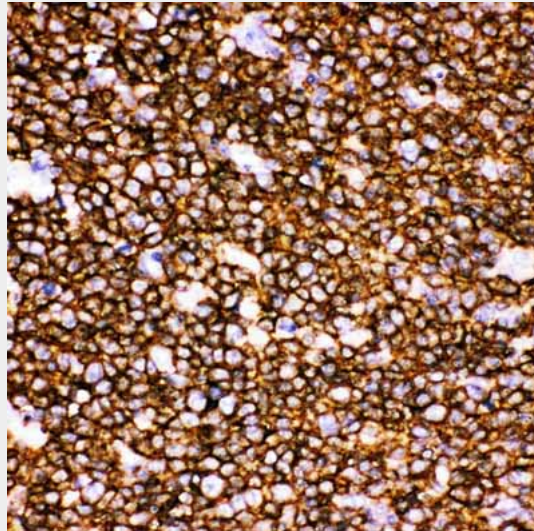


Figure 2. IHC analysis of CD20 using anti-CD20 antibody (ABO11771).CD20 was detected in paraffin-embedded section of Human Tonsil Tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum.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

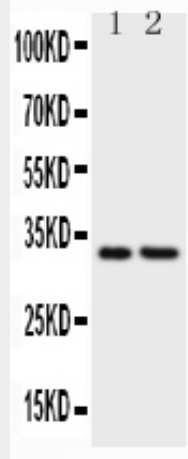


Figure 3. Western blot analysis of CD20 using anti-CD20 antibody (ABO11771). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: RAJI Whole Cell 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.

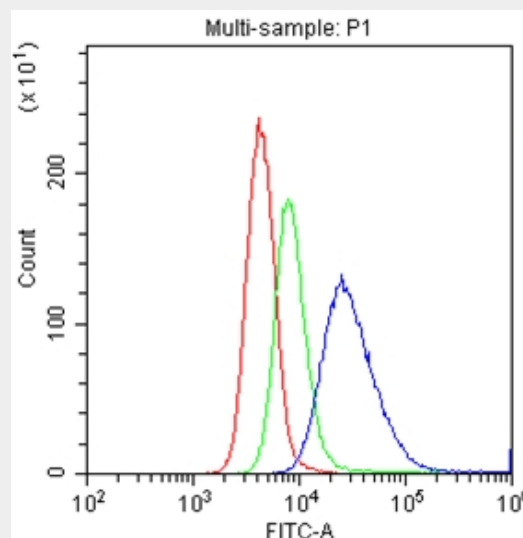


Figure 4. Flow Cytometry analysis of U937 cells using anti-CD20 antibody (ABO11771). Overlay histogram showing U937 cells stained with ABO11771 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-CD20 Antibody (ABO11771, 1 μ g/1x10⁶ cells) for 30 min at 20 $^{\circ}$ C. DyLight[®]488 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.

Anti-CD20 Picoband Antibody - 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.