

Anti-CD20/MS4A1 Antibody Picoband™ (monoclonal, 4I11)
Catalog # ABO15111**Specification****Anti-CD20/MS4A1 Antibody Picoband™ (monoclonal, 4I11) - Product Information**

Application	WB, IF
Primary Accession	P11836
Host	Mouse
Isotype	Mouse IgG2a
Reactivity	Human
Clonality	Monoclonal
Format	Lyophilized

Description

Anti-CD20/MS4A1 Antibody Picoband™ (monoclonal, 4I11) . Tested in IF, WB applications. This antibody reacts with Human.

Reconstitution

Adding 0.2 ml of distilled water will yield a concentration of 500 µg/ml.

Anti-CD20/MS4A1 Antibody Picoband™ (monoclonal, 4I11) - 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

37 kDa KDa

Application Details

Western blot, 0.25-0.5 µg/ml, Human
 Immunofluorescence, 5 µg/ml, Human

Contents

Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na₂HPO₄.

Immunogen

E.coli-derived human CD20/MS4A1 recombinant protein (Position: M1-P297).

Purification

Immunogen affinity purified.

Storage

**At -20°C for one year from date of receipt.
After reconstitution, at 4°C for one month.
It can also be aliquotted and stored frozen
at -20°C for six months. Avoid repeated
freezing and thawing.**

Anti-CD20/MS4A1 Antibody Picoband™ (monoclonal, 4I11) - 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.

Anti-CD20/MS4A1 Antibody Picoband™ (monoclonal, 4I11) - 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/MS4A1 Antibody Picoband™ (monoclonal, 4I11) - Images

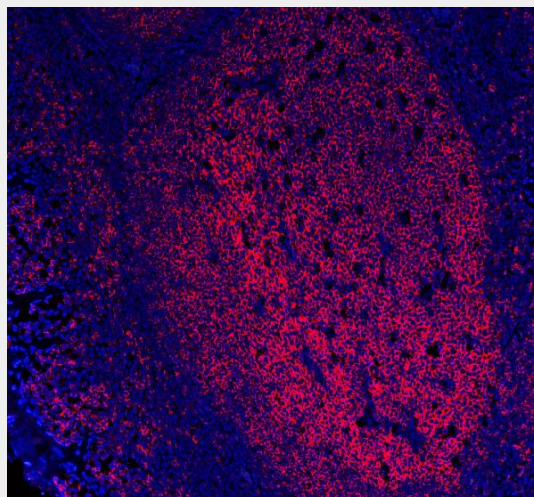


Figure 1. IF analysis of CD20/MS4A1 using anti-CD20/MS4A1 antibody (M03780-4). CD20/MS4A1 was detected in a paraffin-embedded section of human tonsil tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 5 µg/mL rabbit anti-CD20/MS4A1 Antibody (M03780-4) overnight at 4°C. Biotin conjugated goat anti-mouse IgG (BA1001) was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using DyLight®550 Conjugated Avidin (BA1134). The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

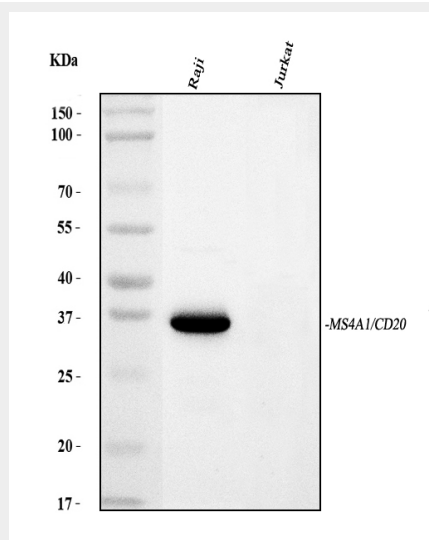


Figure 2. Western blot analysis of CD20/MS4A1 using anti-CD20/MS4A1 antibody (M03780-4). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 µg of sample under reducing conditions.

Lane 1: human Raji whole cell lysates,
 Lane 2: human Jurkat whole cell lysates.

After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with mouse anti-CD20/MS4A1 antigen affinity purified monoclonal antibody (Catalog # M03780-4) at 0.5 µg/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-mouse 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 (Catalog # EK1001) with Tanon 5200 system. A specific band was detected for CD20/MS4A1 at approximately 37 kDa. The expected band size for CD20/MS4A1 is at 33 kDa.

Anti-CD20/MS4A1 Antibody Picoband™ (monoclonal, 4I11) - 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.