

Rabbit anti-Human CD20/MS4A1 Polyclonal Antibody | anti-MS4A1 antibody

Anti-CD20/MS4A1 Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA19281	Rabbit	Human	Western Blot, Immunohistochemistry, Flow Cytometry, Functional Assay, ELISA

PRODUCT SYNONYMS

CD20/MS4A1; Polyclonal Antibody; Anti-CD20/MS4A1 Antibody; MS4A1; CD20; B-lymphocyte antigen CD20; B-lymphocyte surface antigen B1; Bp35; Leukocyte surface antigen Leu-16; Membrane-spanning 4-domains subfamily A member 1; CD antigen CD20; membrane spanning 4-domains A1; anti-MS4A1 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Rabbit IgG polyclonal antibody for CD20/MS4A1 detection.
Purity/Purification	Immunogen affinity purified.
Form/Format	Lyophilized. Each vial contains 4mg Trehalose, 0.9mg NaCl and 0.2mg Na ₂ HPO ₄ .
Applicable Applications for anti-MS4A1 antibody	WB (Western Blot), IHC (Immunohistochemistry), FCM/FACS (Flow Cytometry), ELISA (Direct ELISA)
Application Notes	WB: 0.1-0.25ug/ml Human IHC-P: 1-2ug/ml Human FC/FACS/FCM: 1-3ug/1x10 ⁶ cells Human Direct ELISA: 0.1-0.5ug/ml Human
Immunogen	E Coli-derived human CD20/MS4A1 recombinant protein (Position: M1-P297).
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.
Recommended Detection Systems	Recommended Detection Systems
Preparation and Storage	Store at -20 degree C for one year. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for a longer time. Avoid repeated freezing and thawing.



FCM (Flow Cytometry)

Figure 9. Flow Cytometry analysis of Raji cells using anti-CD20/MS4A1 antibody (AAA19281). Overlay histogram showing Raji cells stained with AAA19281 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-CD20/MS4A1 Antibody (AAA19281, 1μg/1x106 cells) for 30 min at 20 degree C. DyLight®488 conjugated goat anti-rabbit IgG (5-10μg/1x106 cells) was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was rabbit IgG (1μg/1x106) used under the same conditions. Unlabelled sample (Red line) was also used as a control.



WB (Western Blot)

Figure 1. Western blot analysis of CD20/MS4A1 using anti-CD20/MS4A1 antibody (AAA19281). 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: human Daudi whole cell lysates. 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/MS4A1 antigen affinity purified polyclonal antibody (Catalog # AAA19281) at 0. 25 μg/mL overnight at 4 degree 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 1:5000 for 1. 5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # with Tanon 5200 system. A specific band was detected for CD20/MS4A1 at approximately 33KD. The expected band size for CD20/MS4A1 is at 33KD.



IHC (Immunohistochemistry)

Figure 8. IHC analysis of CD20/MS4A1 using anti-CD20/MS4A1 antibody (AAA19281). CD20/MS4A1 was detected in paraffin-embedded section of human tonsil tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8. 0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2μg/ml rabbit anti-CD20/MS4A1 Antibody (AAA19281) overnight at 4 degree C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # with DAB as the chromogen.



IHC (Immunohistochemistry)

Figure 7. IHC analysis of CD20/MS4A1 using anti-CD20/MS4A1 antibody (AAA19281). CD20/MS4A1 was detected in paraffin-embedded section of human skin cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8. 0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2μg/ml rabbit anti-CD20/MS4A1 Antibody (AAA19281) overnight at 4 degree C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # with DAB as the chromogen.



IHC (Immunohistochemistry)

Figure 6. IHC analysis of CD20/MS4A1 using anti-CD20/MS4A1 antibody (AAA19281). CD20/MS4A1 was detected in paraffin-embedded section of human rectal cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8. 0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2μg/ml rabbit anti-CD20/MS4A1 Antibody (AAA19281) overnight at 4 degree C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # with DAB as the chromogen.



IHC (Immunohistochemistry)

Figure 5. IHC analysis of CD20/MS4A1 using anti-CD20/MS4A1 antibody (AAA19281). CD20/MS4A1 was detected in paraffin-embedded section of human gastric cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8. 0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2μg/ml rabbit anti-CD20/MS4A1 Antibody (AAA19281) overnight at 4 degree C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # with DAB as the chromogen.

ADDITIONAL INFORMATION

Related Product Information for anti-MS4A1 antibody	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.
References	1. Cragg MS, Walshe CA, Ivanov AO, Glennie MJ (2005). "The biology of CD20 and its potential as a target for mAb therapy". Curr. Dir. Autoimmun. Current Directions in Autoimmunity 8: 140-74. 2. Hardy, Richard (2008). "Chapter 7: B Lymphocyte Development and Biology". In Paul, William. Fundamental Immunology (Book) (6th ed.). Philadelphia: Lippincott Williams & Wilkins. pp. 237-269. 3. Kuijpers TW, Bende RJ, Baars PA, Grummels A, Derks IA, Dolman KM, Beaumont T, Tedder TF, van Noesel CJ, Eldering E, van Lier RA (January 2010). "CD20 deficiency in humans results in impaired T cell-independent antibody responses". J. Clin. Invest. 120 (1): 214-22.

NCBI AND UNIPROT INFORMATION

NCBI GI #	115968
NCBI GeneID	931
UniProt Accession #	P11836; P08984; Q13963; A6NMS4; B4DT24
Molecular Weight	297
NCBI Official Full Name	B-lymphocyte antigen CD20
NCBI Official Synonym Full Names	membrane-spanning 4-domains, subfamily A, member 1
NCBI Official Symbol	MS4A1
NCBI Official Synonym Symbols	B1; S7; Bp35; CD20; CVID5; MS4A2; LEU-16
NCBI Protein Information	B-lymphocyte antigen CD20; CD20 antigen; CD20 receptor; leukocyte surface antigen Leu-16; B-lymphocyte cell-surface antigen B1
UniProt Protein Name	B-lymphocyte antigen CD20
UniProt Gene Name	MS4A1
UniProt Synonym Gene Names	CD20
UniProt Entry Name	CD20_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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