

Anti-CD59 Picoband Antibody

Catalog # ABO12901

Product Information

Application	WB, IHC-P, E
Primary Accession	O55186
Host	Rabbit
Reactivity	Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for CD59 detection. Tested with WB, IHC-P, Direct ELISA in Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	12509
Other Names	CD59A glycoprotein, MAC-inhibitory protein, MAC-IP, Membrane attack complex inhibition factor, MACIF, Protectin, CD59, Cd59a, Cd59
Calculated MW	13648
Application Details	Western blot, 0.1-0.5 μ g/ml Immunohistochemistry(Paraffin-embedded Section), 0.5-1 μ g/ml Direct ELISA, 0.1-0.5 μ g/ml
Subcellular Localization	Cell membrane; Lipid-anchor, GPI-anchor.
Source	Eukaryota
Contents	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg NaN ₃ .
Immunogen	E. coli-derived mouse CD59 recombinant protein (Position: L24-S96).
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.

Protein Information

Name	Cd59a {ECO:0000312 MGI:MGI:109177}
Function	Potent inhibitor of the complement membrane attack complex (MAC) action, which protects self-cells from damage during complement activation. Acts by binding to the beta-haipins of C8 (C8A and C8B) components of the assembling MAC, forming an intermolecular beta-sheet that prevents incorporation of the multiple copies of C9 required for complete formation of the osmolytic pore.
Cellular Location	Cell membrane {ECO:0000250 UniProtKB:P13987}; Lipid-anchor, GPI-anchor {ECO:0000250 UniProtKB:P13987}. Secreted {ECO:0000250 UniProtKB:P13987}. Note=Localizes to the cell surface Soluble form found in a number of tissues {ECO:0000250 UniProtKB:P13987}
Tissue Location	Expressed in all tissues examined (liver, kidney, spleen, thymus, brain and heart). Low levels in thymus. Also expressed in mononuclear cells, erythrocytes and platelets. Barely detected in neutrophils.

Background

CD59 glycoprotein, also known as MAC-inhibitory protein (MAC-IP), membrane inhibitor of reactive lysis (MIRL), or protectin, is a protein that in humans is encoded by the CD59 gene. This gene encodes a cell surface glycoprotein that regulates complement-mediated cell lysis, and it is involved in lymphocyte signal transduction. This protein is a potent inhibitor of the complement membrane attack complex, whereby it binds complement C8 and/or C9 during the assembly of this complex, thereby inhibiting the incorporation of multiple copies of C9 into the complex, which is necessary for osmolytic pore formation. This protein also plays a role in signal transduction pathways in the activation of T cells. Mutations in this gene cause CD59 deficiency, a disease resulting in hemolytic anemia and thrombosis, and which causes cerebral infarction. Multiple alternatively spliced transcript variants, which encode the same protein, have been identified for this gene.

Images

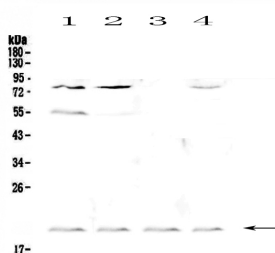
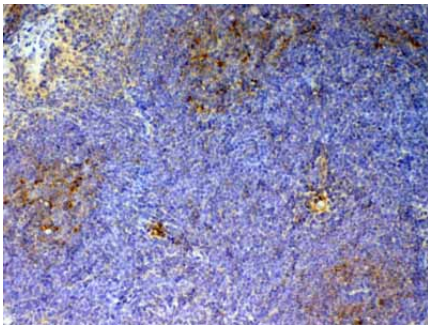


Figure 1. Western blot analysis of CD59 using anti-CD59 antibody (ABO12901). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: rat liver tissue lysates, Lane 2: rat kidney tissue lysates, Lane 3: rat spleen tissue lysates, Lane 4: rat brain tissue 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-CD59 antigen affinity purified polyclonal antibody (Catalog # ABO12901) 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 CD59 at approximately 20KD. The expected band size for CD59 is at 14KD.

Figure 2. IHC analysis of CD59 using anti-CD59 antibody (ABO12901). CD59 was detected in paraffin-embedded



section of mouse spleen 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-CD59 Antibody (ABO12901) 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.

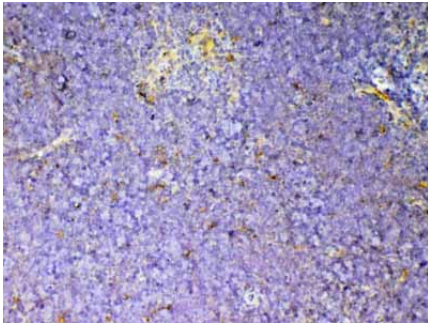


Figure 3. IHC analysis of CD59 using anti-CD59 antibody (ABO12901). CD59 was detected in paraffin-embedded section of mouse thymus tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 μ g/ml rabbit anti-CD59 Antibody (ABO12901) 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.

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