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antibody and ELISA experts

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Anti-Myelin oligodendrocyte glycoprotein/MOG Antibody Picoband™

Catalog Number: A03294

About MOG

Myelin oligodendrocyte glycoprotein (MOG) is a glycoprotein believed to be important in the myelination of nerves in the central nervous system (CNS). In humans this protein is encoded by the MOG gene. This gene is mapped to 6p22.1. It is speculated to serve as a necessary "adhesion molecule" to provide structural integrity to the myelin sheath and is known to develop late on the oligodendrocyte. The product of this gene is a membrane protein expressed on the oligodendrocyte cell surface and the outermost surface of myelin sheaths. Due to this localization, it is a primary target antigen involved in immune-mediated demyelination. This protein may be involved in completion and maintenance of the myelin sheath and in cell-cell communication. Alternatively spliced transcript variants encoding different isoforms have been identified.

Overview

Product Name	Anti-Myelin oligodendrocyte glycoprotein/MOG Antibody Picoband™
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Myelin oligodendrocyte glycoprotein/MOG Antibody Picoband™ catalog # A03294. Tested in Flow Cytometry, IHC, WB applications. This antibody reacts with Human, Mouse, Rat.
Application	Flow Cytometry, IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na_2HPO_4, 0.05mg NaN_3.
Storage Instructions	Store 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 freeze-thaw cycles.
Host	Rabbit
Uniprot ID	Q16653

Technical Details

Immunogen	A synthetic peptide corresponding to a sequence in the middle region of human Myelin oligodendrocyte glycoprotein/MOG, which shares 85.7% and 88.6% amino acid (aa) sequence identity with mouse and rat Myelin oligodendrocyte glycoprotein/MOG, respectively.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P), IHC(F) and ICC.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized

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Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Suggested Dilutions	Dilute the sample so that the expected range of concentrations fall within the detection range of this kit. If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples. Some PubMed article(s) citing the expression level of this target are as follows: Boster Bio's internal QC testing used: Western blot, 0.1-0.5ug/ml, Mouse, Rat Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, Mouse, Rat, By Heat Flow Cytometry, 1-3ug/1x10^6 cells, Human

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Anti-Myelin oligodendrocyte glycoprotein/MOG Antibody Picoband™ (A03294) Images

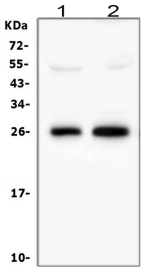

Figure 1. Western blot analysis of Myelin oligodendrocyte glycoprotein using anti-Myelin oligodendrocyte glycoprotein antibody (A03294).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.
Lane 1: rat brain tissue lysates,
Lane 2: mouse 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-Myelin oligodendrocyte glycoprotein antigen affinity purified polyclonal antibody (Catalog # A03294) at 0.5 ug/mL overnight at 4°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 (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for Myelin oligodendrocyte glycoprotein at approximately 26KD. The expected band size for Myelin oligodendrocyte glycoprotein is at 28KD.

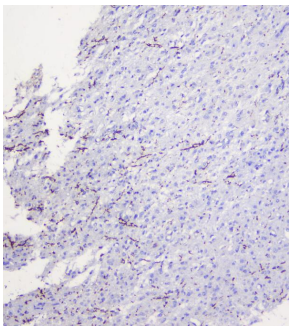

Figure 2. IHC analysis of Myelin oligodendrocyte glycoprotein using anti-Myelin oligodendrocyte glycoprotein antibody (A03294).
Myelin oligodendrocyte glycoprotein was detected in paraffin-embedded section of human glioma tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-Myelin oligodendrocyte glycoprotein Antibody (A03294) 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 Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

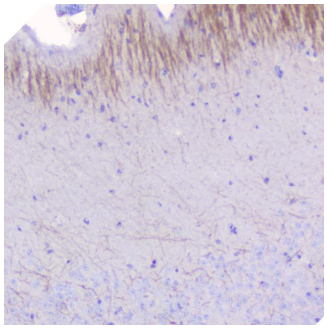

Figure 3. IHC analysis of Myelin oligodendrocyte glycoprotein using anti-Myelin oligodendrocyte glycoprotein antibody (A03294).
Myelin oligodendrocyte glycoprotein was detected in paraffin-embedded section of mouse brain tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-Myelin oligodendrocyte glycoprotein Antibody (A03294) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C.

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The tissue section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

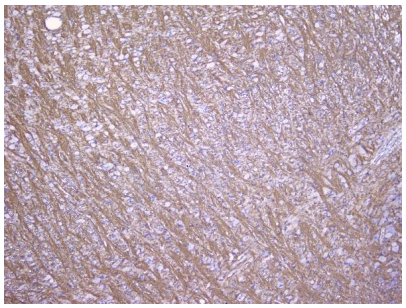

Figure 4. IHC analysis of Myelin oligodendrocyte glycoprotein using anti-Myelin oligodendrocyte glycoprotein antibody (A03294).
Myelin oligodendrocyte glycoprotein was detected in paraffin-embedded section of rat brain tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-Myelin oligodendrocyte glycoprotein Antibody (A03294) 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 Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

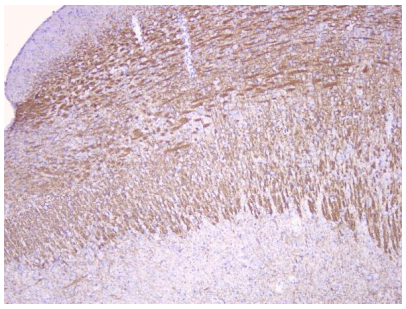

Figure 5. IHC analysis of Myelin oligodendrocyte glycoprotein using anti-Myelin oligodendrocyte glycoprotein antibody (A03294).
Myelin oligodendrocyte glycoprotein was detected in paraffin-embedded section of rat brain tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-Myelin oligodendrocyte glycoprotein Antibody (A03294) 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 Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

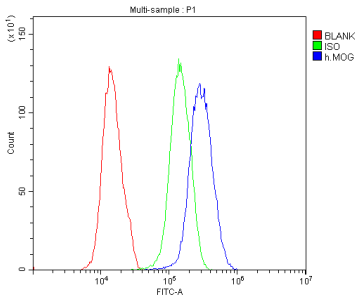

Figure 6. Flow Cytometry analysis of U251 cells using anti-Myelin oligodendrocyte glycoprotein antibody (A03294).
Overlay histogram showing U251 cells stained with A03294 (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-Myelin oligodendrocyte glycoprotein Antibody (A03294,1ug/1x10^6 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x10^6 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x10^6) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

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