

Anti-MAG Picoband® Antibody (monoclonal, 2G11)

Catalog Number: M03019

About MAG

MAG (Myelin-associated glycoprotein), also known as SIGLEC4A, is a cell membrane glycoprotein that is a member of the SIGLEC family of proteins and is a functional ligand of the NOGO-66 receptor, NgR. It is thought to be involved in the process of myelination. MAG is a sialic acid-binding SIGLEC protein and is a functional ligand for the NOGO receptor. The MAG gene is mapped on 19q13.12. Cleavage of GPI-linked proteins from axons protects growth cones from MAG-induced collapse, and dominant-negative NgR eliminates MAG inhibition of neurite outgrowth. MAG-resistant embryonic neurons were rendered MAG-sensitive by expression of NgR. MAG binds specifically to an NgR-expressing cell line in a GPI-dependent and sialic acid-independent manner. Experiments blocking NgR from interacting with MAG prevented inhibition of neurite outgrowth by MAG. In cultured human embryonic kidney (HEK) cells expressing the NOGO receptor, p75 (NTR) was required for MAG-induced intracellular calcium elevation.

Overview

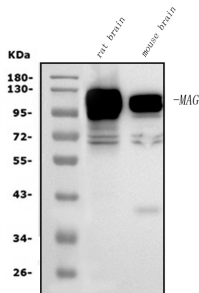
Product Name	Anti-MAG Picoband® Antibody (monoclonal, 2G11)
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-MAG Picoband® Antibody (monoclonal, 2G11) catalog # M03019. Tested in Flow Cytometry, IF, IHC, WB applications. This antibody reacts with Human, Mouse, Rat. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	Flow Cytometry, IF, IHC, WB
Clonality	Monoclonal 2G11
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl and 0.2mg Na ₂ HPO ₄ .
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	Mouse
Uniprot ID	P20916

Technical Details

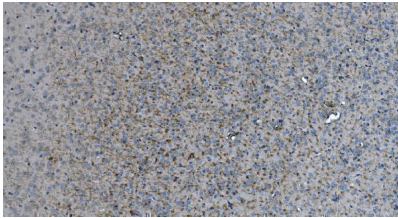
Immunogen	E.coli-derived human MAG recombinant protein (Position: E34-R605).
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Mouse IgG (EK1001) for Western blot, and HRP Conjugated anti-Mouse IgG Super Vision Assay Kit (SV0001-1) for IHC(P).
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Mouse IgG2a

Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.1-0.25ug/ml, Mouse, Rat Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml, Mouse,Rat Immunofluorescence, 5 ug/ml, Rat Flow Cytometry (Fixed), 1-3ug/1x10 ⁶ cells, Human

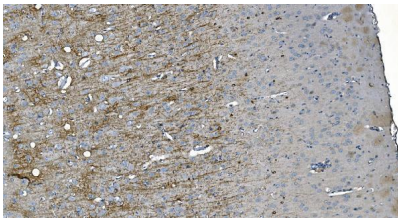
Anti-MAG Picoband® Antibody (monoclonal, 2G11) (M03019) Images



Western blot analysis of MAG using anti-MAG antibody (M03019). 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 mouse anti-MAG antigen affinity purified monoclonal antibody (Catalog # M03019) at 0.25 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-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 MAG at approximately 100KD. The expected band size for MAG is at 100KD.

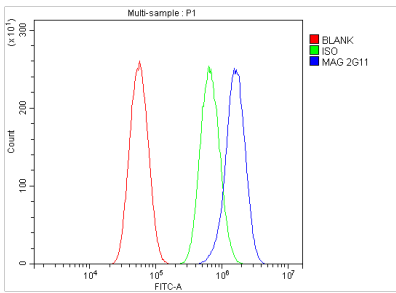


IHC analysis of MAG using anti-MAG antibody (M03019). MAG was detected in paraffin-embedded section of mouse brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml mouse anti-MAG Antibody (M03019) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

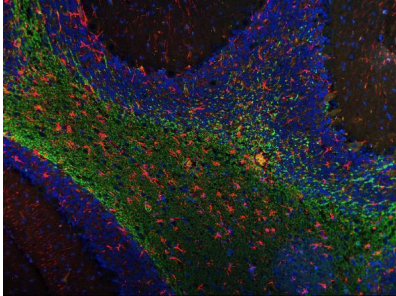


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Flow Cytometry analysis of U87 cells using anti-MAG antibody (M03019). Overlay histogram showing U87 cells stained with M03019 (Blue line). The cells were fixed with 4% paraformaldehyde and blocked with 10% normal goat serum. And then incubated with mouse anti- MAG Antibody (M03019, 1ug/1x10⁶ cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10ug/1x10⁶ cells) was used as secondary antibody for 30 minutes at



20°C. Isotype control antibody (Green line) was mouse IgG (1ug/1x10⁶) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.



IF analysis of GFAP and MAG using anti-GFAP antibody and anti-MAG antibody (M03019). GFAP and MAG was detected in a paraffin-embedded section of rat cerebellum 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 ug/mL rabbit anti-GFAP antibody and mouse anti-MAG antibody (M03019) overnight at 4°C. DyLight®594 Conjugated Goat Anti-Rabbit IgG (BA1142), DyLight®488 Conjugated Goat Anti-Mouse IgG (BA1126) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

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Anti-MAG Antibody (monoclonal, 2G11)

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