

## Mouse MAG Monoclonal Antibody | anti-MAG antibody

Anti-MAG Antibody (monoclonal, 2G11)

| CATALOG # | HOST  | REACTIVITY        | APPLICATIONS                                                         |
|-----------|-------|-------------------|----------------------------------------------------------------------|
| AAA125925 | Mouse | Human, Mouse, Rat | Flow Cytometry, Functional Assay, Immunohistochemistry, Western Blot |

### PRODUCT SYNONYMS

MAG; Monoclonal Antibody; Anti-MAG Antibody (monoclonal; 2G11); GMA; Myelin-associated glycoprotein; Siglec-4a; myelin associated glycoprotein; anti-MAG antibody

### PRODUCT SPECIFICATIONS

|                                               |                                                                                                                                                                                                            |
|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Host                                          | Mouse                                                                                                                                                                                                      |
| Reactivity                                    | Human, Mouse, Rat                                                                                                                                                                                          |
| Clonality                                     | Monoclonal                                                                                                                                                                                                 |
| Isotype                                       | Mouse IgG2a                                                                                                                                                                                                |
| Clone Number                                  | 2G11                                                                                                                                                                                                       |
| Specificity                                   | Mouse IgG monoclonal antibody for MAG detection.                                                                                                                                                           |
| Purity/Purification                           | Immunogen affinity purified.                                                                                                                                                                               |
| Form/Format                                   | Lyophilized. Each vial contains 4mg Trehalose, 0.9mg NaCl and 0.2mg Na2HPO4.                                                                                                                               |
| Applicable Applications for anti-MAG antibody | FCM/FACS (Flow Cytometry), IHC (Immunohistochemistry), WB (Western Blot)                                                                                                                                   |
| Immunogen                                     | E Coli-derived human MAG recombinant protein (Position: E34-R605).                                                                                                                                         |
| 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. |

### IMAGES



#### FCM/FACS (Flow Cytometry)

Figure 4. Flow Cytometry analysis of U87 cells using anti-MAG antibody (AAA125925). Overlay histogram showing U87 cells stained with AAA125925 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with mouse anti- MAG Antibody (AAA125925, 1&mu;g/1x106 cells) for 30 min at 20 degree C. DyLight&reg;488 conjugated goat anti-mouse IgG (BA1126, 5-10&mu;g/1x106 cells) was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was mouse IgG (1&mu;g/1x106) used under the same conditions. Unlabelled sample (Red line) was also used as a control.



#### IHC (Immunohistochemistry)

Figure 3. IHC analysis of MAG using anti-MAG antibody (AAA125925). MAG was detected in paraffin-embedded section of rat 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 2&mu;g/ml mouse anti-MAG Antibody (AAA125925) overnight at 4 degree C. Biotinylated goat anti-mouse 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) with DAB as the chromogen.



#### IHC (Immunohistochemistry)

Figure 2. IHC analysis of MAG using anti-MAG antibody (AAA125925). 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 2µg/ml mouse anti-MAG Antibody (AAA125925) overnight at 4 degree C. Biotinylated goat anti-mouse 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) with DAB as the chromogen.



#### WB (Western Blot)

Figure 1. Western blot analysis of MAG using anti-MAG antibody (AAA125925). 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 50µg 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 # AAA125925) 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-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 with Tanon 5200 system. A specific band was detected for MAG at approximately 100KD. The expected band size for MAG is at 100KD.

## ADDITIONAL INFORMATION

|                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Product Information for anti-MAG antibody | 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. |
| References                                        | <ol style="list-style-type: none"><li>1. Atwal, J. K., Pinkston-Gosse, J., Syken, J., Stawicki, S., Wu, J., Shatz, C., Tessier-Lavigne, M. PirB is a functional receptor for myelin inhibitors of axonal regeneration. <i>Science</i> 322: 967-970, 2008.</li><li>2. Barton, D. E., Arquint, M., Roder, J., Dunn, R., Francke, U. The myelin-associated glycoprotein gene: mapping to human chromosome 19 and mouse chromosome 7 and expression in quivering mice. <i>Genomics</i> 1: 107-112, 1987.</li><li>3. Liu, B. P., Fournier, A., GrandPre, T., Strittmatter, S. M. Myelin-associated glycoprotein as a functional ligand for the Nogo-66 receptor. <i>Science</i> 297: 1190-1193, 2002.</li></ol>                                                                                                                                                                                                                                                                                                                           |

## NCBI AND UNIPROT INFORMATION

|                                  |                                                                                                                          |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| NCBI GI #                        | 11225258                                                                                                                 |
| NCBI GeneID                      | 4099                                                                                                                     |
| NCBI Accession #                 | NP_002352.1                                                                                                              |
| NCBI GenBank Nucleotide #        | NM_002361.3                                                                                                              |
| UniProt Accession #              | P20916; Q567S4; B7Z2E5; F5GYC0                                                                                           |
| Molecular Weight                 | 69,069 Da                                                                                                                |
| NCBI Official Full Name          | myelin-associated glycoprotein isoform a                                                                                 |
| NCBI Official Synonym Full Names | myelin associated glycoprotein                                                                                           |
| NCBI Official Symbol             | MAG                                                                                                                      |
| NCBI Official Synonym Symbols    | GMA; S-MAG; SIGLEC4A; SIGLEC-4A                                                                                          |
| NCBI Protein Information         | myelin-associated glycoprotein; sialic acid binding Ig-like lectin 4A; sialic acid-binding immunoglobulin-like lectin 4A |
| UniProt Protein Name             | Myelin-associated glycoprotein                                                                                           |
| UniProt Gene Name                | MAG                                                                                                                      |

|                            |           |
|----------------------------|-----------|
| UniProt Synonym Gene Names | GMA       |
| UniProt Entry Name         | MAG_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.

AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | [contact@aaabiotech.com](mailto:contact@aaabiotech.com)  
Online datasheet: <https://stage.aaabiotech.com/monoclonal/mag-antibody-clone-2g11-flow-cytometry-immunohistochemistry-western-blot-elisa/125925>