

**MAG Antibody (clone 3C7)**  
**Mouse Monoclonal Antibody**  
**Catalog # ALS14399**

**Specification**

---

**MAG Antibody (clone 3C7) - Product Information**

Application	<b>WB, IHC</b>
Primary Accession	<a href="#">P20916</a>
Reactivity	<b>Human</b>
Host	<b>Mouse</b>
Clonality	<b>Monoclonal</b>
Calculated MW	<b>69kDa KDa</b>

**MAG Antibody (clone 3C7) - Additional Information**

**Gene ID** 4099

**Other Names**

Myelin-associated glycoprotein, Siglec-4a, MAG, GMA

**Target/Specificity**

Human MAG

**Reconstitution & Storage**

Aliquot and store at -20°C or -80°C. Avoid freeze-thaw cycles.

**Precautions**

MAG Antibody (clone 3C7) is for research use only and not for use in diagnostic or therapeutic procedures.

**MAG Antibody (clone 3C7) - Protein Information**

**Name** MAG

**Synonyms** GMA

**Function**

Adhesion molecule that mediates interactions between myelinating cells and neurons by binding to neuronal sialic acid- containing gangliosides and to the glycoproteins RTN4R and RTN4RL2 (By similarity). Not required for initial myelination, but seems to play a role in the maintenance of normal axon myelination. Protects motoneurons against apoptosis, also after injury; protection against apoptosis is probably mediated via interaction with neuronal RTN4R and RTN4RL2. Required to prevent degeneration of myelinated axons in adults; this probably depends on binding to gangliosides on the axon cell membrane (By similarity). Negative regulator of neurite outgrowth; in dorsal root ganglion neurons the inhibition is mediated primarily via binding to neuronal RTN4R or RTN4RL2 and to a lesser degree via binding to neuronal gangliosides. In cerebellar granule cells the inhibition is mediated primarily via binding to neuronal gangliosides. In sensory neurons, inhibition of neurite extension depends only partially on RTN4R, RTN4RL2 and

gangliosides. Inhibits axon longitudinal growth (By similarity). Inhibits axon outgrowth by binding to RTN4R (By similarity). Preferentially binds to alpha-2,3-linked sialic acid. Binds ganglioside Gt1b (By similarity).

#### Cellular Location

Cell membrane; Single-pass type I membrane protein Membrane raft  
{ECO:0000250|UniProtKB:P07722}

#### Tissue Location

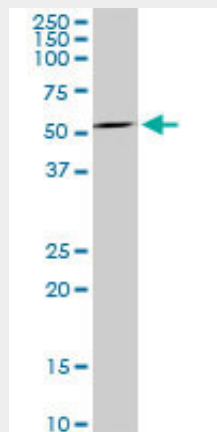
Both isoform 1 and isoform 2 are detected in myelinated structures in the central and peripheral nervous system, in periaxonal myelin and at Schmidt-Lanterman incisures (PubMed:6200494, PubMed:9495552). Detected in optic nerve, in oligodendroglia and in periaxonal myelin sheaths (PubMed:6200494). Detected in compact myelin (at protein level) (PubMed:6200494). Both isoform 1 and isoform 2 are detected in the central and peripheral nervous system (PubMed:9495552)

### MAG Antibody (clone 3C7) - Protocols

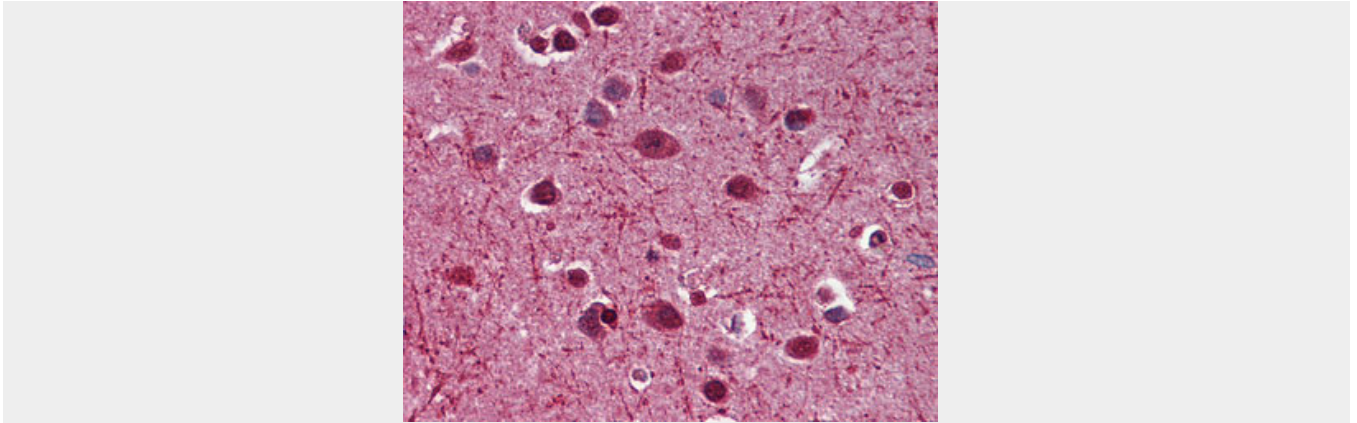
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### MAG Antibody (clone 3C7) - Images



Western blot of MAG expression in Jurkat cell lysate.



Anti-MAG antibody IHC of human brain, cortex.

### **MAG Antibody (clone 3C7) - Background**

Adhesion molecule in postnatal neural development that mediates sialic-acid dependent cell-cell interactions between neuronal and myelinating cells. Preferentially binds to alpha-2,3- linked sialic acid (By similarity).

### **MAG Antibody (clone 3C7) - References**

- Sato S.,et al.Biochem. Biophys. Res. Commun. 163:1473-1480(1989).
- Spagnol G.,et al.J. Neurosci. Res. 24:137-142(1989).
- Ota T.,et al.Nat. Genet. 36:40-45(2004).
- Grimwood J.,et al.Nature 428:529-535(2004).
- Burger D.,et al.Biochem. Biophys. Res. Commun. 197:457-464(1993).