



Qty: 100 µg/400 µl

Rabbit anti-S/L-MAG

Catalog No. 34-6200

Lot No. See product label

## Rabbit anti-S/L-MAG (Small/Large Myelin-Associated Glycoprotein)

### FORM

This polyclonal antibody is supplied as a 400 µl aliquot at a concentration of 0.25 mg/ml in phosphate buffered saline (pH 7.4) containing 0.1% sodium azide. The antibody is epitope-affinity-purified from rabbit antiserum.

PAD: ZMD.211

### IMMUNOGEN

Human S/L-MAG fusion protein with a C-terminal region insert.

### SPECIFICITY

This antibody reacts with the shared C-terminal region of the small and large myelin-associated glycoprotein.

### REACTIVITY

Reactivity is confirmed with rat brain homogenates. Based on sequence homology, the antibody is also expected to react with human.

Sample	Western Blotting	Immunoprecipitation (Native)	Immunofluorescence
Rat	+++	+++	++

(Excellent +++, Good++, Poor +, No reactivity 0, Not applicable N/A, Not Determined ND)

### USAGE

Working concentrations for specific applications should be determined by the investigator. Appropriate concentrations will be affected by several factors, including secondary antibody affinity, antigen concentration, sensitivity of detection method, temperature and length of incubations, etc. The suitability of this antibody for applications other than those listed below has not been determined. The following concentration ranges are recommended starting points for this product.

**Western Blotting:** 1-3 µg/mL  
**Immunoprecipitation:** 1-3 µg/IP reaction  
**Immunofluorescence:** 10-30 µg/µl

### STORAGE

Store at 2-8°C for up to one month. Store at -20°C for long-term storage. Avoid repeated freezing and thawing.

(cont'd)

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**BACKGROUND**

The Myelin-Associated Glycoprotein (MAG) is a minor constituent of the myelin sheath in the central nervous system (CNS) and the peripheral nervous system (PNS).<sup>(1,2)</sup> MAG is a member of the immunoglobulin superfamily and shares significant homology with the neural cell adhesion molecule (N-CAM).<sup>(3)</sup> In rat there are two isoforms of MAG that are the result of alternative splicing of the primary MAG<sup>(4)</sup>. Large-MAG (L-MAG) has been identified as the functionally relevant isoform in the central nervous system, while small-MAG (S-MAG) maintains the integrity of myelinated fibers in the peripheral nervous system.<sup>(5)</sup> L-MAG has a non-glycosylated mass of 72kDa, whereas the glycosylated form has an apparent molecular weight of 100 kDa<sup>(6)</sup> Small-MAG (S-MAG) has a non-glycosylated apparent molecular weight of 67 kDa.<sup>(4)</sup>

MAG is an inhibitor of axon regeneration<sup>(7)</sup> and has an important role in maintaining a stable interaction between axons and myelin<sup>(8)</sup>. Early loss of MAG in the development of multiple sclerosis plaques suggests its role in the pathogenesis of this disease.<sup>(6)</sup>

**REFERENCES**

1. Figlewicz D. A. et al. *PNAS*. 84:600-604, 1981.
2. Quarles R.H. et al. *J Neurochem*. 21: 1177-1191, 1973.
3. Salzer et al. *J Cell Biol*. 104:957-965, 1987.
4. Frail D and Braun P, *J Biol Chem* 259:14857-14862, 1984.
5. Schachner M and Bartsch U, *Glia* 29(2):154-165, 2000.
6. Quarles R.H. et al. *Crit Rev Neurobiol*. 5:1-28, 1989.
7. Schwab and Bandtlow. *Nature* 371(6499):658-659, 1994.
8. Quarles R.H. et al. *Crit Rev Neurobiol*. 5:1-28, 1989.

**RELATED PRODUCTS**

<b>Product</b>	<b>Clone/PAD*</b>	<b>Cat. No.</b>
Rabbit anti-MAG-L	ZMD.210	34-6100
Rabbit anti-Myelin Basic Protein	-----	08-0038
Rabbit anti-Myelin Basic Protein	-----	18-0038
Mouse anti-CD56 (N-CAM)	123C3	07-5603
Mouse anti-CD56 (N-CAM)	123C3	18-0152
Rabbit anti-S100	Zy44	18-0046

\*PAD: Polyclonal Antibody Designation

<b>Conjugate</b>	<b>ZyMAX™ Goat x Rabbit IgG (H+L)</b>	<b>ZyMAX™ Goat x Mouse IgG (H+L)</b>
Purified	81-6100	81-6500
FITC	81-6111	81-6511
TRITC	81-6114	81-6514
Cy™3	81-6115	81-6515
Cy™5	81-6116	81-6516
HRP	81-6120	81-6520
AP	81-6122	81-6522
Biotin	81-6140	81-6540

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