Rat MAG/Siglec-4a Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF538

DESCRIPTION

Species Reactivity	Rat
Specificity	Detects rat MAG/Siglec-4a in direct ELISAs and Western blots.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant rat MAG/Siglec-4a Gly20-Pro516 Accession # P07722
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

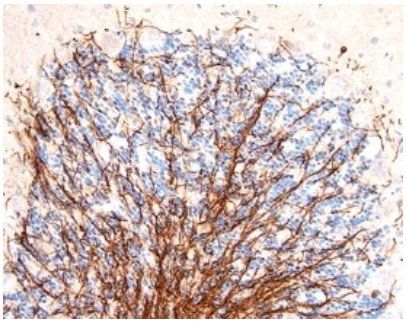
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Rat MAG/Siglec-4a Fc Chimera (Catalog # 538-MG)
Immunohistochemistry	5-15 µg/mL	See Below

DATA

Immunohistochemistry



MAG/Siglec-4a in Rat Brain. MAG/Siglec-4a was detected in perfusion fixed frozen sections of rat brain (cerebellum) using 25 µg/mL Goat Anti-Rat MAG/Siglec-4a Antigen Affinity-purified Polyclonal Antibody (Catalog # AF538) overnight at 4 °C. Tissue was stained with the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific labeling was localized to processes of oligodendrocytes. View our protocol for Chromogenic IHC Staining of Frozen Tissue Sections.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

MAG (Myelin-Associated Glycoprotein), a type I transmembrane glycoprotein containing five Ig-like domains in its extracellular domain is an adhesion molecule belonging to the immunoglobin superfamily. Within this superfamily, MAG, CD22, CD33, Schwann cell myelin protein, and sialoadhesin which bind specifically to cell-surface glycan containing sialic acid residues define the I-type sialyl lectin subgroup, also called the sialoadhesin family. Sialoadhesins mediate diverse biological processes through recognition of specific sialyted glycans on cell surface. MAG is expressed on myelinating oligodenrocytes and Schwann cells, and preferentially recognizes α2, 3-linked sialic acid on O-linked glycans and gangliosides. MAG exists as two isoforms which differ in the sequence and length of the cytoplasmic tail. The large form (71 kDa) and small form (67 kDa) arise from alternative spliced mRNAs. Although MAG might encounter haematopoietic cells and lymphocytes under pathologic conditions, it would normally be expected to interact with neuronal cells. It has been shown that MAG promotes axonal growth from neonatal DRG neurons and embryonic spinal neurons, but is a potent inhibitor of axonal re-growth from adult DRG and postnatal cerebellar neurons. MAG plays an important role in the interaction between axons and myelin. A soluble form of MAG containing the extracellular domain is released from myelin in large quantities and identified in normal human tissues and in tissues from patients with neurological disorders. This soluble MAG might contribute to the lack of CNS neuron regeneration after injury.

References:

1. Kelm, S. *et al*. (1994) Current Biology **4**:965.
2. McKerracher, L. *et al*. (1994) Neuron **13**:805.
3. Tang, S. *et al*. (1997) Molecular and Cellular Neuroscience **9**:333.
4. Cai, D. *et al*. (1999) Neuron **22**:89.

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