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MAG Rabbit pAb

Catalog # AP98332

Product Information

Application	WB, IHC-P, IHC-F, IF, E
Primary Accession	P20916
Other Accession	P20916
Reactivity	Rat, Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	69069
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human MAG
Epitope Specificity	551-626/626
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the immunoglobulin superfamily. SIGLEC (sialic acid binding Ig-like lectin) family. Contains 4 Ig-like C2-type (immunoglobulin-like) domains. Contains 1 Ig-like V-type (immunoglobulin-like) domain.
SUBUNIT	Binds to RTN4R.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	MAG (myelin associated glycoprotein) is a Adhesion molecule in postnatal neural development that mediates sialic-acid dependent cell-cell interactions between neuronal and myelinating cells. Preferentially binds to alpha2,3-linked sialic acid. Isoform L-MAG is critical for the formation of myelin in the CNS, whereas isoform S-MAG is sufficient to maintain the integrity of myelin in PNS. Binds to RTN4R. single-pass type I membrane protein. Expressed by myelinating glial cells in the central and peripheral nervous system. Detected in oligodendrocyte processes before formation of compact myelin. Restricted to the periaxonal space after myelination. Isoform S-MAG is the predominant isoform in CNS and PNS of the adult. In CNS isoform L-MAG is the major form synthesized early in development, and it persists as a significant proportion of the MAG present in the adult. In the PNS isoform L-MAG is expressed at modest levels during development; it is absent in the adult. Belongs to the immunoglobulin superfamily. SIGLEC (sialic acid binding Ig-like lectin) family.

Additional Information

Gene ID	4099
Other Names	GMA; S-MAG; SIGLEC-4A; SIGLEC4; SIGLEC4A; SPG75; 1B236; MAG_HUMAN; MAG; MAG_MOUSE; MAG_RAT; Brain neuron cytoplasmic protein 3; Sialic acid-binding Ig-like lectin 4a (Siglec-4a); myelin associated glycoprotein; sialic acid binding Ig-like lectin 4A

Dilution	WB=1:500-2000,ELISA=1:5000-10000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,Flow-Cyt=1:50-100
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

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)

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.