SANTA CRUZ BIOTECHNOLOGY, INC.

MAG (C-19): sc-9544

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

BACKGROUND

Myelin-associated glycoprotein (MAG) is a nervous system cell-surface adhesion protein that is involved in linking myelinating glial cells to neuronal axons. MAG contains a sialic acid binding site and five IgG-like domains, thus identifying MAG as a member of a subgroup of the immunoglobulin superfamily. Like myelin, MAG inhibits axonal outgrowth and contributes to the inhibitory properties of myelin. Growth inhibition by MAG has been shown to be blocked when cerebellar neurons are pre-incubated with the neurotrophins BDNF or GDNF. It is suggested that this neurotrophin priming elevates cAMP and activates PKA.

REFERENCES

1. Lai, C., et al. 1987. Neural protein 1B236/myelin-associated glycoprotein (MAG) defines a subgroup of the immunoglobulin superfamily. Immunol. Rev. 100: 129-151.
2. McKerracher, L., et al. 1994. Identification of myelin-associated glycoprotein as a major myelin-derived inhibitor of neurite growth. Neuron 13: 805-811.
3. Quarles, R.H. 1997. Glycoproteins of myelin sheaths. J. Mol. Neurosci. 8: 1-12.
4. Collins, B.E., et al. 1997. Sialic acid specificity of myelin-associated glycoprotein binding. J. Biol. Chem. 272: 1248-1255.
5. Shen, Y.J., et al. 1998. Myelin-associated glycoprotein in myelin and expressed by Schwann cells inhibits axonal regeneration and branching. Mol. Cell. Neurosci. 12: 79-91.
6. Cai, D., et al. 1999. Prior exposure to neurotrophins blocks inhibition of axonal regeneration by MAG and myelin via a cAMP-dependent mechanism. Neuron 22: 89-101.
7. Schachner, M., et al. 2000. Multiple functions of the myelin-associated glycoprotein MAG (siglec-4a) in formation and maintenance of myelin. Glia 29: 154-165.
8. Vyas, A.A., et al. 2002. Gangliosides are functional nerve cell ligands for myelin-associated glycoprotein (MAG), an inhibitor of nerve regeneration. Proc. Natl. Acad. Sci. USA 99: 8412-8417.

CHROMOSOMAL LOCATION

Genetic locus: MAG (human) mapping to 19q13.12; Mag (mouse) mapping to 7 B1.

SOURCE

MAG (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of MAG of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-9544 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MAG (C-19) is recommended for detection of MAG of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

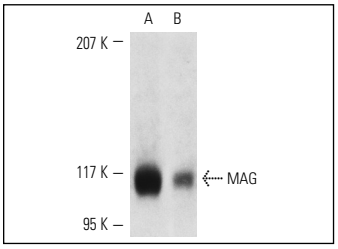
MAG (C-19) is also recommended for detection of MAG in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for MAG siRNA (h): sc-35841, MAG siRNA (m): sc-35842, MAG shRNA Plasmid (h): sc-35841-SH, MAG shRNA Plasmid (m): sc-35842-SH, MAG shRNA (h) Lentiviral Particles: sc-35841-V and MAG shRNA (m) Lentiviral Particles: sc-35842-V.

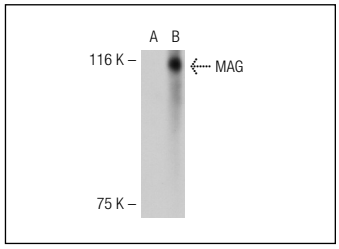
Molecular Weight of MAG: 100 kDa.

Positive Controls: rat brain extract: sc-2392, mouse brain extract: sc-2253 or MAG (h): 293T Lysate: sc-116497.

DATA



MAG (C-19): sc-9544. Western blot analysis of MAG expression in mouse (**A**) and rat (**B**) brain tissue extracts.



MAG (C-19): sc-9544. Western blot analysis of MAG expression in non-transfected: sc-117752 (**A**) and human MAG transfected: sc-116497 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Sun, Y.T., et al. 2010. Deficiency of electroneutral K^+-Cl^- cotransporter 3 causes a disruption in impulse propagation along peripheral nerves. Glia 58: 1544-1552.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

MONOS Satisfaction Guaranteed

Try **MAG (A-11): sc-166849** or **MAG (G-11): sc-166780**, our highly recommended monoclonal alternatives to MAG (C-19).