

OMG (K-21): sc-14524

BACKGROUND

Oligodendrocyte myelin glycoprotein (OMG, OMgp) is a glycosylphosphatidylinositol-anchored protein expressed by neurons and oligodendrocytes that influences the development of the adult central nervous system (CNS). OMG inhibits neurite outgrowth through its interaction with the Nogo receptor. This function requires its leucine-rich repeat domain, a highly-conserved region in OMG that influences cell proliferation, formation and maintenance of myelin sheaths. OMG inhibits neurite outgrowth from rat cerebellar granule and hippocampal cells; from dorsal root ganglion explants in which growth cone collapse was observed; from rat retinal ganglion neurons; and from NG108 and PC-12 cells.

REFERENCES

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2. Peters, N., et al. 1999. Quantitative analysis of NF1 and OMgp gene transcripts in sporadic gliomas, sporadic meningiomas and neurofibromatosis type 1-associated plexiform neurofibromas. *Acta Neuropathol.* 97: 547-551.
3. Kottis, V., et al. 2002. Oligodendrocyte myelin glycoprotein (OMgp) is an inhibitor of neurite outgrowth. *J. Neurochem.* 82: 1566-1569.
4. Wang, K.C., et al. 2002. p75 interacts with the Nogo receptor as a co-receptor for Nogo, MAG and OMgp. *Nature* 420: 74-78.
5. Vourc'h, P., et al. 2004. Oligodendrocyte myelin glycoprotein (OMgp): evolution, structure and function. *Brain Res. Brain Res. Rev.* 45: 115-124.
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7. Li, S., et al. 2004. Blockade of Nogo-66, myelin-associated glycoprotein, and oligodendrocyte myelin glycoprotein by soluble Nogo-66 receptor promotes axonal sprouting and recovery after spinal injury. *J. Neurosci.* 24: 10511-10520.
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CHROMOSOMAL LOCATION

Genetic locus: OMG (human) mapping to 17q11.2; Omg (mouse) mapping to 11 B5.

SOURCE

OMG (K-21) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of OMG 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-14524 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

OMG (K-21) is recommended for detection of OMG of human and, to a lesser extent, mouse and rat 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).

OMG (K-21) is also recommended for detection of OMG in additional species, including equine, canine and porcine.

Suitable for use as control antibody for OMG siRNA (h): sc-42032, OMG siRNA (m): sc-42033, OMG shRNA Plasmid (h): sc-42032-SH, OMG shRNA Plasmid (m): sc-42033-SH, OMG shRNA (h) Lentiviral Particles: sc-42032-V and OMG shRNA (m) Lentiviral Particles: sc-42033-V.

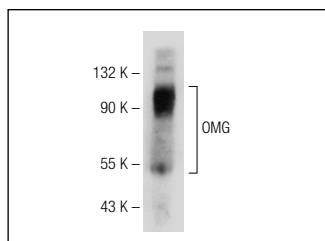
Molecular Weight of OMG: 120 kDa.

Positive Controls: SK-N-MC cell lysate: sc-2237.

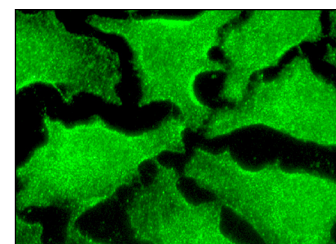
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



OMG (K-21): sc-14524. Western blot analysis of OMG expression in mouse brain tissue extract.



OMG (K-21): sc-14524. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization.

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.