



OMG (h): 293T Lysate: sc-170075

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

1. Habib, A.A., et al. 1998. The OMgp gene, a second growth suppressor within the NF1 gene. *Oncogene* 16: 1525-1531.
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.
6. Bischof, F., et al. 2004. A structurally available encephalitogenic epitope of myelin oligodendrocyte glycoprotein specifically induces a diversified pathogenic autoimmune response. *J. Immunol.* 173: 600-606.
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.
8. Marta, C.B., et al. 2005. Signaling cascades activated upon antibody cross-linking of myelin oligodendrocyte glycoprotein: potential implications for multiple sclerosis. *J. Biol. Chem.* 280: 8985-8993.
9. Hirata, S., et al. 2005. Prevention of experimental autoimmune encephalomyelitis by transfer of embryonic stem cell-derived dendritic cells expressing myelin oligodendrocyte glycoprotein peptide along with TRAIL or programmed death-1 ligand. *J. Immunol.* 174: 1888-1897.

CHROMOSOMAL LOCATION

Genetic locus: OMG (human) mapping to 17q11.2.

PRODUCT

OMG (h): 293T Lysate represents a lysate of human OMG transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

RESEARCH USE

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

APPLICATIONS

OMG (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive OMG antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.