

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse OMgp in direct ELISAs and Western blots. In these formats, approximately 35% cross-reactivity with recombinant human OMgp is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse OMgp (R&D Systems, Catalog # 1674-MG) Ile25-Ser420 Accession # Q63912
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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.

Western Blot Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Oligodendrocyte myelin glycoprotein (OMgp or OMG), Nogo, and myelin-associated glycoprotein (MAG), are three myelin-derived axon outgrowth inhibitors that collapse axonal growth cones and inhibit neurite outgrowth (1 - 3). These three structurally distinct proteins contribute to the myelin-associated inhibitory activity that prevents axonal regeneration after injury of the adult central nervous system (CNS). Mouse OMgp cDNA encodes a 440 amino acid (aa) residue glycosylphosphatidylinositol (GPI)-anchored protein that has a 24 aa signal peptide, eight leucine-rich repeats (LRR) followed by five serine/threonine-rich repeats (4). OMgp has multiple potential N-glycosylation and O-glycosylation sites. Mouse and human OMgp share approximately 88% aa sequence identity. OMgp is expressed on the surface of oligodendrocytes and on large projection neurons, including Purkinje cells of the cerebellum, pyramidal cells of the hippocampus, motoneurons of the brainstem and anterior horn cells of the spinal cord (5). The neurite outgrowth inhibitory activities of all three myelin-derived proteins are mediated by binding to a common receptor complex consisting of the Nogo receptor (NgR) and the p75 neurotrophin receptor (NGFR) (2, 3). Besides its function in the inhibition of axonal growth, OMgp has also been implicated in the inhibition of proliferation. Although the transmembrane receptor that mediates the proliferation inhibition activity has not been identified, the LRR repeats of OMgp were shown to be essential for both the proliferation inhibition and neurite outgrowth inhibition activities (6).

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