ALPHA DIAGNOSTIC INTERNATIONAL

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Product Specification Sheet

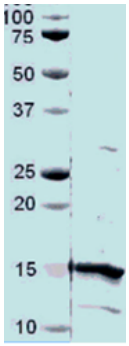
Rat Myelin-oligodendrocyte glycoprotein (MOG) Protein

☐ **Cat #** MOG27-R-25 Recombinant Rat purified MOG Protein (1-125aa) **SIZE**: 25 ug

Myelin-oligodendrocyte glycoprotein (MOG) is a member of the immunoglobulin (Ig) superfamily, exclusively expressed in the central nervous system (CNS). MOG is an intrinsic membrane protein characterized by a N-terminal extracellular immunoglobulin-like variable (Ig-like V-type) domain, two hydrophobic transmembrane domains and a cytoplasmic C-terminal region. The N-terminal MOG domain has strong homology with the N-terminus of butyrophilin, a protein expressed in the lactating mammary gland. Human MOG gene is localized to chromosome 6p22-p21.3 (band C of mouse chromosome 17) at the distal end of the MHC class Ib region. **Despite the similar names, oligodendrocyte-myelin glycoprotein (OMG) is a separate protein encoded within a large intron of the NF1 gene.** The 2 glycoproteins are associated specifically with oligodendrocytes and myelin, but have quite different roles in myelinogenesis and are structurally unrelated. MOG is an intrinsic membrane molecule with 2 transmembrane domains, whereas OMG is anchored in the outer leaflet of the plasma membrane through a glycophospholipid tail. OMG belongs to the family of proteins with a series of tandem leucine-rich repeats, while MOG is a member of the Ig superfamily.

Although MOG is a relatively minor component of the myelin membrane, it is a primary auto-antigen target involved in the pathogenesis of immune-mediated demyelinating diseases including experimental autoimmune encephalomyelitis (EAE) and multiple sclerosis. The MOG 35-55 peptide is an immunodominant epitope of MOG that induces strong T and B cell responses. A single injection of this peptide fragment can produce an exacerbating-remitting neurologic disease with extensive plaque-like demyelination, which may serve as a model for investigating multiple sclerosis.

Sources of Antigen and Antibodies



Recombinant rat MOG protein (1-125 aa, extracellular domain, protein accession Q6MFX9) was expressed as his-tag fusion protein in E. coli (>95% pure, ~14.2 Kda, low endotoxin @ <0.1EU/mg). It is supplied in 25 mM sodium acetate buffer, pH=4.0 at 1 mg/ml or or see lot sp. conc on the vial with no preservatives. A suitable preservatives can be added if necessary or sterile filter it cell culture applications. Store frozen in suitable size aliquots.

Biological Activity

When injected into rat with complete Freund's adjuvant, the recombinant protein showed EAE symptoms such as limp tail, hind limb weakness, hind limb paralysis, and weight loss after induction. It can also be used for T cell and B cell responses, cytokine response, and antigen presentation studies (2-20 ug/ml). The in vivo dose may vary with animal strain and size.

Stability: 6-12 months at –20oC or below.

Shipping: 4oC for solutions and room temp for powder.

General References: Pham-Dinh, D (1995) Genomics 29: 345-352; Pham-Dinh, D. (1995) Immunogenetics 42: 386-391; Pham-Dinh, D (1993) PNAS 90: 7990-7994; Roth, M.-P (1995) Genomics 28: 241-250; Ichikawa M (1996) J. Immunol. 157, 919-926; Bernard CC (1997) J. Mol. Med. 75, 77-87; Slavin A (1998) Autoimmunity 28, 109-120

This product is for In vitro research use only.

Related items

Catalog# ProdDescription

MOG15-A Anti-Mouse Myelin Oligodendrocyte Glycoprotein (35-55 aa) peptide IgG #2, aff pure

MOG15-C Recombinant purified Mouse Myelin Oligodendrocyte Glycoprotein (MOG 1-125aa, his-tag) control for WB

MOG15-P Mouse Myelin Oligodendrocyte Glycoprotein (35-55 aa) control/blocking peptide#2

MOG15-S Anti-Mouse Myelin Oligodendrocyte Glycoprotein (35-55 aa) peptide antiserum #2

MOG16-A Anti-Human Myelin Oligodendrocyte Glycoprotein (C-terminal) peptide IgG#2, aff pure

MOG16-C Recombinant purified Human Myelin Oligodendrocyte Glycoprotein (MOG 1-125aa, his-tag) control for WB

MOG16-P Human Myelin Oligodendrocyte Glycoprotein (C-terminal) control blocking peptide #2

MOG17-C Recombinant purified Rat Myelin Oligodendrocyte Glycoprotein (MOG 1-125aa, his-tag) control for WB

MOG18-M Monoclonal Anti-Mouse/Rat Myelin Oligodendrocyte Glycoprotein Rec. Protein IgG, aff pure

MOG3555-M Anti-Human Myelin Oligodendrocyte Glycoprotein (35-55 aa) peptide IgG

MOG3555-P-1 Rat/Mouse Myelin Oligodendrocyte Glycoprotein 35-55 aa peptide pure

MOG3555-P2-1 Rat/Mouse Myelin Oligodendrocyte Glycoprotein 35-55 aa peptide pure (Ac/amide form)

4000 Mouse Anti-Myelin Oligodendrcyte protein (MOG35-55) Ig's ELISA kit, 96 tests, Quantitative

600-200-MOG Mouse Anti-Myelin Oligodendrcyte protein (MOG35-55) Ig's ELISA Kit, 96 tests, Quantitative

600-210-MOG Rabbit Anti-Myelin Oligodendrcyte protein (MOG35-55) Ig's ELISA Kit, 96 tests, Quantitative

MOG27-R-25 130205A

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