

Recombinant Rat myelin oligodendrocyte glycoprotein Protein, His tagged

Cat. No. MOG-043R **Lot. No.** (See product label)

SPECIFICATION

Product Overview	The sequence (Accession #CAE84068) corresponding to the extracellular domain of rat MOG along with a 6×His tag was expressed in E. coli. The recombinant rat MOG (R-rMOG) was purified from urea denatured bacterial lysate using immobilized metal affinity chromatography (IMAC).
Species	Rat
Source	E.coli
ProteinLength	1-125aa
Description	The product of this gene is a membrane protein expressed on the oligodendrocyte cell surface and the outermost surface of myelin sheaths. Due to this localization, it is a primary target antigen involved in immune-mediated demyelination. This protein may be involved in completion and maintenance of the myelin sheath and in cell-cell communication. Alternatively spliced transcript variants encoding different isoforms have been identified.
Tag	6×His
Form	Solution
Molecular Mass	14.2 kDa

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Bio-activity	Female DA rats and Lewis rats (7-9 weeks old) were immunized (tail base s.c.) with 50-75 µg/animal of rat rMOG in complete Freund's adjuvant. DA and Lewis rats showed EAE symptoms such as limp tail, hind limb weakness, hind limb paralysis, and weight loss after induction. Please note that no other EAE induction protocols were tested including IFA/cytokine model.
Resuspension condition	Rat MOG must be thoroughly mixed directly with Complete Freund's Adjuvant (CFA). Do not dilute recombinant rat MOG with buffers that have pH greater than 4.5. Protein will precipitate at pH higher than 4.5
Endotoxin	Less than 0.1 EU per 1 µg of the protein as determined by Limulus Amebocyte Lysate (LAL) quantitative kinetic assay.
Purity	≥95% by SDS-PAGE
Applications	ELISA; in vivo studies; Western Blotting
Usage	Research use
Storage	Store at -80 centigrade. Avoid repeated freeze-thaw cycles.
Concentration	1 mg/mL
Storage Buffer	25 mM sodium acetate buffer (pH=4.0)
References	1. Jayaram Bettadapura et.al. (1998) Journal of Neurochemistry 70 (4): 1593-1599 2. Alfred R Oliver et al (2003) Journal of Immunology 171:462-468 3. Hans-Christian Von Budingen et.al. (2001) Journal of Clinical Immunology 21 (3): 155-170 4. Jerri-Anne Lyons et.al. (1999) European Journal of Immunology 29: 3432-3439

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5. Hans-Christian Von Budingen et.al. (2004) European Journal of Immunology 34:
2072-2083

GENE INFORMATION

Gene Name Mog myelin oligodendrocyte glycoprotein [Rattus norvegicus]

Official Symbol MOG

Synonyms MOG; myelin oligodendrocyte glycoprotein; myelin-oligodendrocyte glycoprotein;
dystonia 2, torsion (autosomal recessive); MGC105427

Gene ID 24558

mRNA Refseq NM_022668

Protein Refseq NP_073159

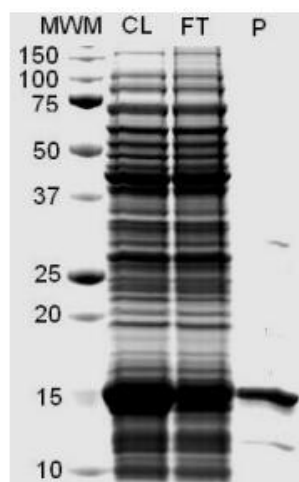
UniProt ID Q63345

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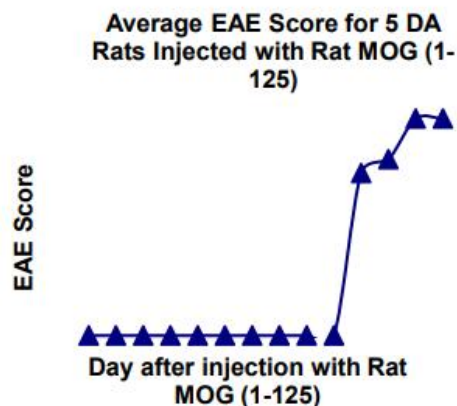
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Rat rMOG on SDS-PAGE



Purified rat rMOG was loaded onto 10-20% Tris-HCl gel (3 µg/well) and resolved at 200V for 60 minutes. Protein markers and purified Rat rMOG (14.2 kDa) are indicated. CL=Crude Cell Lysate, FT=Flow Through, and P=Purified Rat rMOG.

An Example of EAE Data Using Rat rMOG



Five female Dark Agouti (DA) rats (8 weeks old) were injected with 50 µg/animal of Rat rMOG in CFA (total injection volume is 100 µL/animal) subcutaneously (s.c.) at

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the base of the tail. EAE scores may vary due to the animal health and housing conditions. This graph is for the reference only.

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