Product Information Sheet

Product Name:	Recombinant Rat MOG Protein
Catalog Number:	AS-55152-100, AS-55152-500, AS-55152-1000
Lot Number:	See label on the vial
Amount/size:	100 µg, 500 µg, 1000 µg
Source:	The sequence (Accession #CAE84068) corresponding to the extracellular domain of rat MOG along with a 6x 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). The molecular weight of the recombinant rat MOG is 14.2 kDa.
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.
Purity:	Greater than 95% as determined by SDS-PAGE.
Endotoxin (EU/µg):	Less than 0.1 EU per 1 µg of the protein as determined by Limulus Amebocyte Lysate (LAL) quantitative kinetic assay.
Storage:	The purified rat rMOG is supplied as sterile and frozen at 1 mg/ml in 25 mM sodium acetate buffer (pH=4.0). Store at -80 ºC, avoid repeated freeze-thaw cycles.

Instructions:

Myelin Oligodendrocyte Glycoprotein (MOG) is a member of the immunoglobulin superfamily and is expressed exclusively in central nervous system (CNS). Although MOG protein constitutes only 0.01-0.05% of the CNS myelin proteins, it was demonstrated that MOG protein is a crucial autoantigen for multiple sclerosis in humans and experimental autoimmune encephalomyelitis (EAE) in rodents and monkeys (1-5).

The purified rat rMOG is recommended for in vitro studies such as T cell and B cell responses, cytokine response, antigen presentation, Western blotting, and ELISA as well as for in vivo study such as EAE induction in rats.

The following dosages are recommended: 5-20 µg/ml for in vitro study and 50-75 µg per animal for in vivo study (1-5).

Please note, 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!

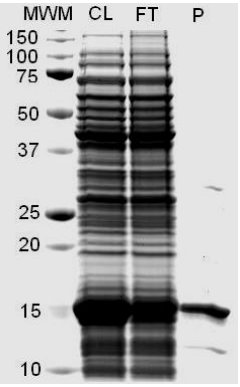

Figure 1.

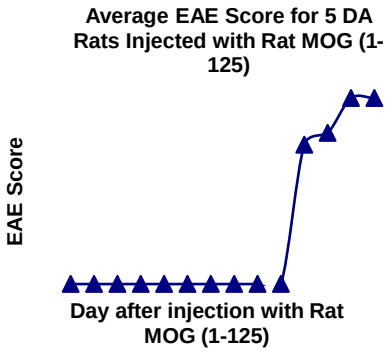

Figure 2.

Figure 1. 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.

Figure 2. 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 (Cat. AS-55152) in CFA (total injection volume is 100 µl/animal) subcutaneously (s.c.) at the base of the tail. EAE scores may vary due to the animal health and housing conditions. This graph is for the reference only.

Related Products:

Product Name	Cat. #
Recombinant mouse MOG (1-125)	**AS-55150**
Recombinant human MOG (1-125)	**AS-55158**
SensoLyte® Anti-Human MOG (1-125) Mouse IgG Specific ELISA Kit	**AS-55153-M**
SensoLyte® Anti-Human MOG (1-125) Rat IgG Specific ELISA Kit	**AS-55153-R**
SensoLyte® Anti-Human MOG (1-125) Human IgG Specific ELISA Kit	**AS-55153-H**
SensoLyte® Anti-Mouse MOG (1-125) IgG Quantitative ELISA Kit	**AS-55156**
SensoLyte® Anti-Rat MOG (1-125) IgG Quantitative ELISA Kit	**AS-55157**

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

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