Product Information Sheet

Product Name:	Recombinant Human MOG Protein
Catalog Number:	AS-55158-100, AS-55158-500, AS-55158-1000
Lot Number:	See label on the vial
Amount/size:	100 μg, 500 μg, 1000 μg
Source:	The sequence (Accession # CAQ10087) corresponding to the extracellular domain of human MOG along with a 6x His tag was expressed in *E. coli.* The recombinant human MOG (H-rMOG) was purified from urea denatured bacterial lysate using immobilized metal affinity chromatography (IMAC). The molecular weight of the recombinant human MOG is 14.2 kDa.
Activity:	Female C57BL/6 mice (8-10 weeks old) were immunized (s.c.) with 100 μg/animal of human rMOG in complete Freund's adjuvant followed by 400 ng/mouse of pertussis toxin on day 0 and day 2 (i.p.). Mice showed EAE symptoms such as limp tail, hind limb weakness, or hind limb paralysis after induction. DA rats immunized with 50 μg/animal of human rMOG at the base of the tail (s.c.) displayed EAE symptoms as well. 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 human rMOG is supplied as sterile and frozen at 1 mg/ml in 25 mM sodium acetate buffer (pH=4.0). Store at -80 ºC for up to 12 months. 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 human 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 mice and monkeys. The following dosages are recommended: 5-20 μg/ml for in vitro study and 50-100 μg per animal for in vivo study (1-5).

Please note, human MOG must be thoroughly mixed directly with Complete Freund's Adjuvant (CFA). Do not dilute recombinant human MOG with buffers that have pH greater than 4.5! Protein will precipitate at pH higher than 4.5!

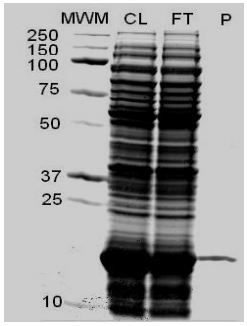

Figure 1.

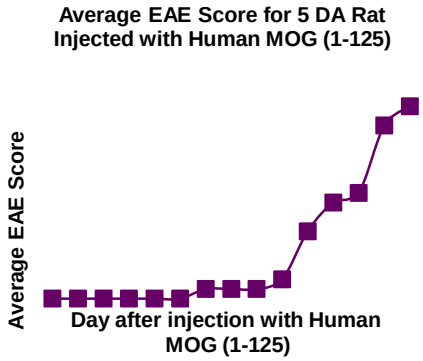

Figure 2.

Figure 1. Human rMOG on SDS-PAGE.
Purified H-rMOG was loaded onto 10-20% Tris-HCl gel at 3 μg/well and resolved at 200V for 60 minutes. Protein markers and purified H-rMOG (14.2 kDa) are indicated. CL=Crude Cell Lysate, FT=Flow Through, and P=Purified H-rMOG.

Figure 2. An Example of EAE Data Using Human rMOG.
Five female Dark Agouti (DA) rats (8 weeks old) were injected with 50 μg/animal of Human rMOG (Cat. AS-55158) 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 rat MOG (1-125)	**AS-55152**
SensoLyte® Anti-Human MOG (1-125) Mouse IgG Specific ELISA Kit	**AS-55153-M**
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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