

Anti-MOG [M3-8] Standard Size Ab01206-10.0

This chimeric human antibody was made using the variable domain sequences of the original Marmoset Fab format, for improved compatibility with existing reagents, assays and techniques.

Isotype and Format: Human IgG1, Kappa

Clone Number: M3-8

Alternative Name(s) of Target: Myelin oligodendrocyte glycoprotein; rMOG

UniProt Accession Number of Target Protein: Q63348

Published Application(s): Blocking, ELISA, IHC

Published Species Reactivity: Rat

Immunogen: Callithrix jacchus marmosets were used, and experimental allergic encephalomyelitis was induced by the injection of rat MOG (aa1-125) into the marmosettes. The rMOG was expressed in *E. coli* and purified to homogeneity. The animals were killed 4-70 days after the onset of symptoms of EAE. Bone marrow and spleen cells were obtained from an immunized *C. jacchus*, the RNA extracted with Trizol reagent and rtPCR used to generate cloning inserts containing Fab portions of IgGk. Phage display was then used to select for the MOG-reactive Fab fragments using the pCOMB3H phage display vector, and binding confirmed using an ELISA.

Specificity: Recognises an epitope which is distinct from M26, M38, M45, M3-24 and M3-31. Is able to displace native anti-MOG Abs from *C. jacchus* serum. Has been shown to bind in situ by immunofluorescence. The epitope recognised is a structural epitope, shown by the lack of recognition of linear MOG peptides. Has also been shown to compete with anti-MOG Abs from three patients with MS. Does not bind to MOG expressed in CHO cells.

Application Notes: This antibody is part of a family of antibodies including clones M26, M38, M45, M3-8, M3-24, M3-31. This antibody has been proposed for the diagnosis and prognosis of multiple sclerosis (MS) or experimental allergic encephalomyelitis (EAE) which is a disease model for MS. This is achieved by using competition assays to determine if there are autoantibodies present in an individual which recognise structural epitopes on MOG which have been shown to be associated with the progression of MS. This antibody has been used in ELISAs and competition assays to characterise its epitope (see specificity statement) and determine whether the similar epitopes are recognised in marmosets with EAE and humans with MS. It was originally generated and tested as a Fab (von Budingen et al, 2002). Whilst this has been shown to not bind to hMOG, it has been shown to compete with IgG from MS patients for binding to rMOG (Lalive et al, 2006). Analysis has also been done on the amino acid sequence of this antibody (von

Budingen et al, 2006).

Antibody First Published in: von Budingen et al Molecular characterization of antibody specificities against myelin/oligodendrocyte glycoprotein in autoimmune demyelination Proc. Natl. Acad. Sci. U.S.A. 99 (12), 8207-8212 (2002) [PMID:12060766](https://pubmed.ncbi.nlm.nih.gov/12060766/)

Note on publication: An analysis of 6 Fab fragments against epitopes on MOG, identifying at least 4 separate epitopes. Analysis of these epitopes including competition assays with marmoset auto-antibodies, human auto-antibodies from MS patients, and confirmation that the epit

Product Form

Size: 200 µg Purified antibody.

Purification: Protein A affinity purified

Supplied In: PBS with 0.02% Proclin 300.

Storage Recommendation: Store at 4°C for up to 3 months. For longer storage, aliquot and store at -20°C.

Concentration: 1 mg/ml.

Important note – This product is for research use only. It is not intended for use in therapeutic or diagnostic procedures for humans or animals.