Anti-MOG Antibody [JM23-06]

ET1705-16

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IHC-P, IF-Tissue, IHC-Fr
Molecular Wt:	Predicted band size: 28 kDa
Clone number:	JM23-06

Description: Myelin oligodendrocyte glycoprotein (MOG) is a glycoprotein believed to be important in the myelination of nerves in the central nervous system (CNS). In humans this protein is encoded by the MOG gene. It is speculated to serve as a necessary "adhesion molecule" to provide structural integrity to the myelin sheath and is known to develop late on the oligodendrocyte. While the primary molecular function of MOG is not yet known, its likely role with the myelin sheath is either in sheath "completion and/or maintenance". More specifically, MOG is speculated to be "necessary" as an "adhesion molecule" on the myelin sheath of the CNS to provide the structural integrity of the myelin sheath."

Immunogen: Synthetic peptide within Human Myelin oligodendrocyte glycoprotein aa 51-100 / 247.

Positive control: Mouse brain tissue lysate, rat brain tissue lysate, human cerebellum tissue, mouse cerebral cortex tissue, mouse hippocampus tissue, mouse brain tissue, rat brain tissue.

Subcellular location: Cell membrane.

Database links: SwissProt: Q16653 Human | Q61885 Mouse | Q63345 Rat

Recommended Dilutions:

WB	1:1,000
IHC-P	1:200-1:1,000
IF-Tissue	1:200
IHC-Fr	1:50

Storage Buffer: 1*TBS (pH7.4), 0.05% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃ or -80℃. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

Images

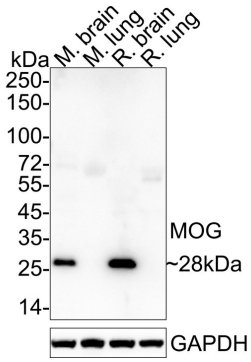

Fig1: Western blot analysis of MOG on different lysates with Rabbit anti-MOG antibody (ET1705-16) at 1/1,000 dilution.

Lane 1: Mouse brain tissue lysate (40 µg/Lane)
Lane 2: Mouse lung tissue lysate (negative) (40 µg/Lane)
Lane 3: Rat brain tissue lysate (40 µg/Lane)
Lane 4: Rat lung tissue lysate (negative) (40 µg/Lane)

Predicted band size: 28 kDa
Observed band size: 28 kDa

Exposure time: 1 minute; ECL: K1802;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (ET1705-16) at 1/1,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

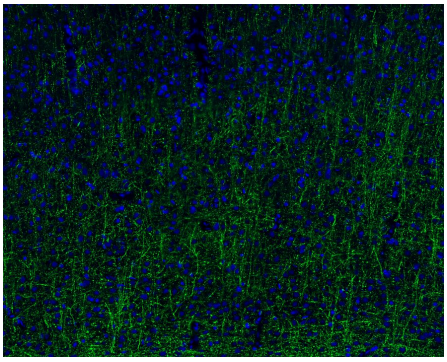

Fig2: Immunofluorescence analysis of frozen mouse cerebral cortex tissue labeling MOG with Rabbit anti-MOG antibody (ET1705-16).

The tissues were blocked in 3% BSA for 30 minutes at room temperature, washed with PBS, and then probed with the primary antibody (ET1705-16, green) at 1/50 dilution overnight at 4℃, washed with PBS. Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) was used as the secondary antibody at 1/200 dilution. Nuclei were counterstained with DAPI (blue). Image acquisition was performed with KFBIO KF-FL-400 Scanner.

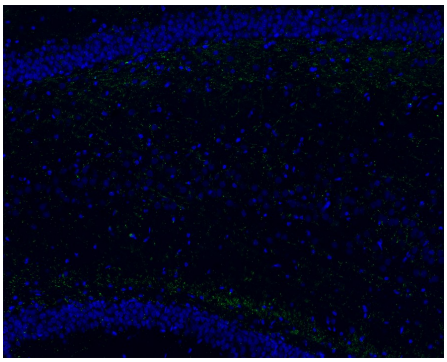

Fig3: Immunofluorescence analysis of frozen mouse hippocampus tissue labeling MOG with Rabbit anti-MOG antibody (ET1705-16).

The tissues were blocked in 3% BSA for 30 minutes at room temperature, washed with PBS, and then probed with the primary antibody (ET1705-16, green) at 1/50 dilution overnight at 4℃, washed with PBS. Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) was used as the secondary antibody at 1/200 dilution. Nuclei were counterstained with DAPI (blue). Image acquisition was performed with KFBIO KF-FL-400 Scanner.

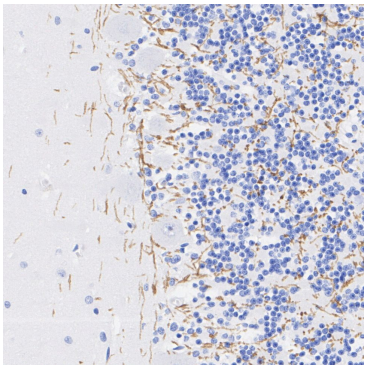

Fig4: Immunohistochemical analysis of paraffin-embedded human cerebellum tissue with Rabbit anti-MOG antibody (ET1705-16) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1705-16) at 1/200 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

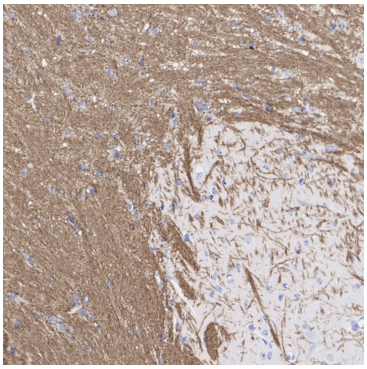

Fig5: Immunohistochemical analysis of paraffin-embedded mouse brain tissue with Rabbit anti-MOG antibody (ET1705-16) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1705-16) at 1/200 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

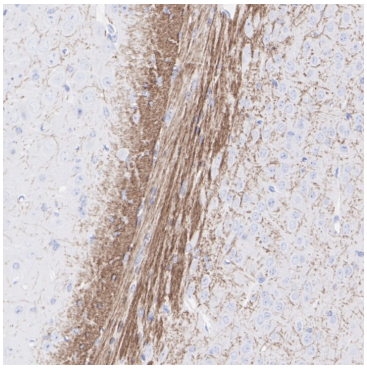

Fig6: Immunohistochemical analysis of paraffin-embedded mouse brain tissue with Rabbit anti-MOG antibody (ET1705-16) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1705-16) at 1/200 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

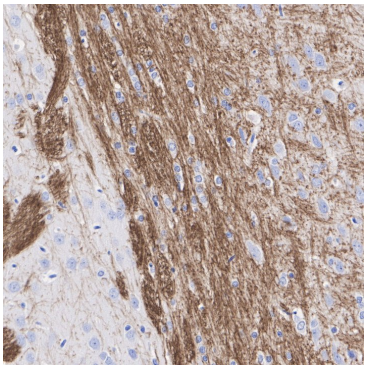

Fig7: Immunohistochemical analysis of paraffin-embedded rat brain tissue with Rabbit anti-MOG antibody (ET1705-16) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1705-16) at 1/200 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

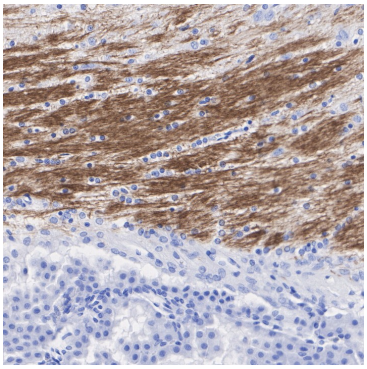

Fig8: Immunohistochemical analysis of paraffin-embedded rat brain tissue with Rabbit anti-MOG antibody (ET1705-16) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1705-16) at 1/200 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

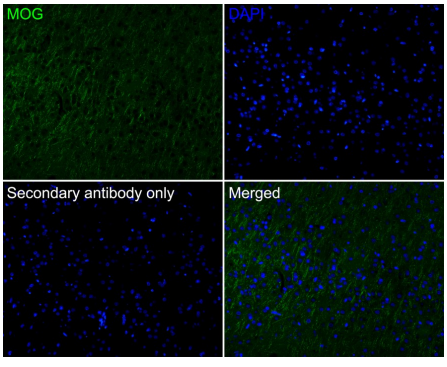

Fig9: Immunofluorescence analysis of paraffin-embedded rat brain tissue labeling MOG with Rabbit anti-MOG antibody (ET1705-16) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 10% negative goat serum for 1 hour at room temperature, washed with PBS, and then probed with the primary antibody (ET1705-16, green) at 1/200 dilution overnight at 4 ℃, washed with PBS.

Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) was used as the secondary antibody at 1/1,000 dilution. Nuclei were counterstained with DAPI (blue).

Background References

1. Hoban AE et al. Regulation of prefrontal cortex myelination by the microbiota. Transl Psychiatry 6:e774 (2016).
2. Michailidou I et al. Complement C3 on microglial clusters in multiple sclerosis occur in chronic but not acute disease: Implication for disease pathogenesis. Glia 65(2):264-277 (2017).