

## MOG

**Cat.No. 401 004; Polyclonal Guinea pig antibody, 100 µl antiserum (lyophilized)**

### Data Sheet

|                            |                                                                                                                                                                                                                                                                         |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Reconstitution/<br>Storage | 100 µl antiserum, lyophilized. For <b>reconstitution</b> add 100 µl H <sub>2</sub> O, then aliquot and store at -20°C until use.<br>Antibodies should be stored at +4°C when still lyophilized. Do not freeze!<br>For detailed information, see back of the data sheet. |
| Applications               | <b>WB:</b> 1 : 1000 (AP staining)<br><b>IP:</b> not tested yet<br><b>ICC:</b> not recommended<br><b>IHC:</b> 1 : 500<br><b>IHC-P:</b> 1 : 250 up to 1 : 500                                                                                                             |
| Immunogen                  | Synthetic peptide corresponding to AA 60 to 75 and 71 to 86 from mouse Myelin oligodendrocyte glycoprotein (UniProt Id: Q61885)                                                                                                                                         |
| Reactivity                 | Reacts with: mouse (Q61885), rat (Q63345), human (Q16653).<br>Other species not tested yet.                                                                                                                                                                             |
| Remarks                    | <b>IHC:</b> Antigen retrieval with citrate buffer pH 6 is required.                                                                                                                                                                                                     |

**TO BE USED IN VITRO / FOR RESEARCH ONLY**  
**NOT TOXIC, NOT HAZARDOUS, NOT INFECTIOUS, NOT CONTAGIOUS**

## Background

The **myelin oligodendrocyte glycoprotein (MOG)** is an integral membrane protein belonging to the immunoglobulin superfamily. It is found exclusively in the central nervous system, where it is localized at the outermost surface of myelin sheaths and oligodendrocyte membranes.

MOG is an important marker for oligodendrocyte maturation since its expression is delayed compared with other major myelin proteins. It may function in completion, compaction, and/or maintenance of myelin, as it has an adhesive role within the CNS. Consistent with this, a homodimeric form of MOG has been observed.

MOG is a key target of demyelinating autoantibodies in inflammatory demyelinating diseases of the CNS, such as multiple sclerosis (MS).

## Selected General References

Myelin Oligodendrocyte Glycoprotein: Deciphering a Target in Inflammatory Demyelinating Diseases.  
Peschl P et al. Front Immunol (2017) PubMed:28533781

The spectrum of MOG autoantibody-associated demyelinating diseases.  
Reindl M et al. Nat Rev Neurol (2013) PubMed:23797245

The crystal structure of myelin oligodendrocyte glycoprotein, a key autoantigen in multiple sclerosis.  
Clements CS et al. Proc. Natl. Acad. Sci. U.S.A. (2003) PubMed:12960396

The structure and function of myelin oligodendrocyte glycoprotein.  
Johns TG et al. J. Neurochem. (1999) PubMed:9886048

Access the online factsheet including applicable protocols at <https://sysy.com/product/401004> or scan the QR-code.



## FAQ - How should I store my antibody?

### Shipping Conditions

- All our antibodies and control proteins / peptides are shipped lyophilized (vacuum freeze-dried) and are stable in this form without loss of quality at ambient temperatures for several weeks.

### Storage of Sealed Vials after Delivery

- **Unlabeled** and **biotin-labeled antibodies** and **control proteins** should be stored at 4°C before reconstitution. **They must not be stored in the freezer when still lyophilized!** Temperatures below zero may cause loss of performance.
- **Fluorescence-labeled antibodies** should be reconstituted immediately upon receipt. Long term storage (several months) may lead to aggregation.
- **Control peptides** should be kept at -20°C before reconstitution.

### Long Term Storage after Reconstitution (General Considerations)

- The storage freezer must not be of the frost-free variety ("no-frost freezer"). This cycle between freezing and thawing (to reduce frost-build-up), which is exactly what should be avoided. For the same reason, antibody vials should be placed in an area of the freezer that has minimal temperature fluctuations, for instance towards the back rather than on a door shelf.
- Aliquot the antibody and store frozen (-20°C to -80°C). Avoid very small aliquots (below 20 µl) and use the smallest storage vial or tube possible. The smaller the aliquot, the more the stock concentration is affected by evaporation and adsorption of the antibody to the surface of the storage vial or tube. Adsorption of the antibody to the surface leads to a substantial loss of activity.
- The addition of glycerol to a final concentration of 50% lowers the freezing point of your stock and keeps your antibody at -20°C in liquid state. This efficiently avoids freeze and thaw cycles.

### Product Specific Hints for Storage

#### Control proteins / peptides

- Store at -20°C to -80°C.

#### Monoclonal Antibodies

- **Ascites** and **hybridoma supernatant** should be stored at -20°C up to -80°C. **Prolonged storage at 4°C is not recommended!** Unlike serum, ascites may contain proteases that will degrade the antibodies.
- **Purified IgG** should be stored at -20°C up to -80°C. Adding a carrier protein like BSA will increase long term stability. Many of our antibodies already contain carrier proteins. Please refer to the data-sheet for detailed information.

#### Polyclonal Antibodies

- **Crude antisera:** With anti-microbials added, they may be stored at 4°C. However, frozen storage (-20°C up to -80°C) is preferable.
- **Affinity purified antibodies:** Less robust than antisera. Storage at -20°C up to -80°C is recommended. Adding a carrier protein like BSA will increase long term stability. Most of our antibodies already contain carrier proteins. Please refer to the data-sheet for detailed information.

#### Fluorescence-labeled Antibodies

- Store as a liquid with 1 : 1 (v/v) glycerol at -20°C. Protect these antibodies from light exposure.

## Avoid repeated freeze-thaw cycles for all antibodies!

## FAQ - How should I reconstitute my antibody?

### Reconstitution

- All our purified antibodies are lyophilized from PBS. To reconstitute the antibody in PBS, add the amount of deionized water given in the respective datasheet. If higher volumes are preferred, add water as mentioned above and then the desired amount of PBS and a stabilizing carrier protein (e.g. BSA) to a final concentration of 2%. Some of our antibodies already contain albumin. Take this into account when adding more carrier protein. For complete reconstitution, carefully remove the lid. After adding water, briefly vortex the solution. You can spin down the liquid by placing the vial into a 50 ml centrifugation tube filled with paper.
- If desired, add small amounts of azide or thimerosal to prevent microbial growth. This is especially recommended if you want to keep an aliquot at 4°C.
- After reconstitution of fluorescence-labeled antibodies, add 1 : 1 (v/v) glycerol to a final concentration of 50%. This lowers the freezing point of your stock and keeps your antibody in liquid state at -20°C.
- Glycerol may also be added to unlabeled primary antibodies. It is a suitable way to avoid freeze-thaw cycles.
- Please refer to our **tips and hints for subsequent storage** of reconstituted antibodies and control peptides and proteins.