SYSY Antibodies

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MPP4

Cat.No. 220 103; Polyclonal rabbit antibody, 50 µg specific antibody (lyophilized)

Data Sheet

Reconstitution/ Storage	50 µg specific antibody, lyophilized. Affinity purified with the immunogen. Albumin was added for stabilization. For **reconstitution** add 50 µl H_2O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C to -80°C until use. Antibodies should be stored at +4°C when still lyophilized. Do not freeze! For detailed information, see back of the data sheet.
Applications	**WB**: 1 : 1000 (AP staining) **IP**: not tested yet **ICC**: not tested yet **IHC**: 1 : 5000 up to 1 : 20000 **IHC-P**: not tested yet
Immunogen	Synthetic peptide corresponding to AA 197 to 216 from mouse MPP4 (UniProt Id: Q6P7F1)
Reactivity	Reacts with: rat (Q9QYH1), mouse (Q6P7F1). Other species not tested yet.
Remarks	**IHC**: For optimal results in retina tissue, follow the retina protocol according to Gierke et al. 2023.

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

Background

The **m**embrane **p**almitoylated **p**rotein **4** (**MPP 4**), also referred to as **DLG 6**, belongs to the membrane associated guanylate kinase (MAGUK) protein family. It is scaffolding protein that is involved in connecting cilia and synaptic structures. It has been shown to interact with MPP 5 and Crb 1.

Selected References for 220 103

The first synapse in vision in the aging mouse retina.
Gierke K, Lux UT, Regus-Leidig H, Brandstätter JH
Frontiers in cellular neuroscience (2023) 17: 1291054. . **IHC; tested species: mouse**

Selected General References

Proteomic analysis of the membrane palmitoylated protein-4 (MPP4)-associated protein complex in the retina.
Förster JR et al. Exp. Eye Res. (2009) PubMed:18955048

Mpp4 recruits Psd95 and Veli3 towards the photoreceptor synapse.
Aartsen WM et al. Hum. Mol. Genet. (2006) PubMed:16520334

MPP5 recruits MPP4 to the CRB1 complex in photoreceptors.
Kantardzhieva A et al. Invest. Ophthalmol. Vis. Sci. (2005) PubMed:15914641

Cellular localization of the MPP4 protein in the mammalian retina.
Stöhr H et al. Invest. Ophthalmol. Vis. Sci. (2003) PubMed:14638699

Developmental and tissue expression patterns of mouse Mpp4 gene.
Li M et al. Biochem. Biophys. Res. Commun. (2003) PubMed:12859944

Characterization of MPP4, a gene highly expressed in photoreceptor cells, and mutation analysis in retinitis pigmentosa.
Conte I et al. Gene (2002) PubMed:12384283

Cloning and characterization of the human retina-specific gene MPP4, a novel member of the p55 subfamily of MAGUK proteins.
Stöhr H et al. Genomics (2001) PubMed:11414766

Access the online factsheet including applicable protocols at https://sysy.com/product/220103 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 a 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.