

## Membrin

Cat.No. 170 003; Polyclonal rabbit antibody, 50 µg specific antibody (lyophilized)

### Data Sheet

Reconstitution/ Storage	50 µg specific antibody, lyophilized. Affinity purified with the immunogen. Albumin and azide were added for stabilization. For <b>reconstitution</b> add 50 µl H <sub>2</sub> O 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	<b>WB:</b> 1 : 1000 (AP staining) <b>IP:</b> yes <b>ICC:</b> 1 : 100 up to 1 : 1000 <b>IHC:</b> not tested yet <b>IHC-P:</b> not tested yet
Immunogen	Recombinant protein corresponding to AA 2 to 190 from human Membrin (UniProt Id: O14653)
Reactivity	Reacts with: rat (O35165), mouse (O35166), human (O14653). Other species not tested yet.

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

## Background

**Membrin** also known as **GOSR 2**, **GS 27** and **GOS 27** is a 27 kDa membrane protein on the surface of the Golgi compartment. It has been shown to serve as a tSNARE in ER to Golgi transport. In co-immunoprecipitation studies membrin was identified as a member of a SNARE complex consisting of syntaxin 5, GOSR 1 (GS 28, GOS 28), rbet1 and rsec22. A more detailed analysis revealed two subcomplexes within this complex. One contains syntaxin 5 (mainly the shorter 35 kDa variant) and GS 28 whereas the other is composed of syntaxin 5 (35 and 42 kDa variant), membrin, rsec22 and rbet1. It has been suggested that these complexes mediate the fusion of ER-derived vesicles with vesicular tubular clusters (VTC), and the fusion of VTCs to form the cis-Golgi compartment.

### Selected References for 170 003

BET1 variants establish impaired vesicular transport as a cause for muscular dystrophy with epilepsy. Donkersvoort S, Krause N, Dergai M, Yun P, Koliwer J, Gorokhova S, Geist Hauserman J, Cummings BB, Hu Y, Smith R, Japinyoying P, et al. EMBO molecular medicine (2021) : e13787. . **WB, ICC; tested species: human,mouse**

A trap mutant reveals the physiological client spectrum of TRC40. Coy-Vergara J, Rivera-Monroy J, Urlaub H, Lenz C, Schwappach B Journal of cell science (2019) 13213: . . **WB; tested species: human**

COG6 interacts with a subset of the Golgi SNAREs and is important for the Golgi complex integrity. Kudlyk T, Willett R, Pokrovskaya ID, Lupashin V Traffic (Copenhagen, Denmark) (2013) 142: 194-204. . **WB**

### Selected General References

Targeting of Arf-1 to the early Golgi by membrin, an ER-Golgi SNARE. Honda A et al. J. Cell Biol. (2005) PubMed:15781476

Countercurrent distribution of two distinct SNARE complexes mediating transport within the Golgi stack. Volchuk A et al. Mol. Biol. Cell (2004) PubMed:14742712

The SNARE motif contributes to rbet1 intracellular targeting and dynamics independently of SNARE interactions. Joglekar AP et al. J. Biol. Chem. (2003) PubMed:12566453

Sequential tethering of Golgins and catalysis of SNAREpin assembly by the vesicle-tethering protein p115. Shorter J et al. J. Cell Biol. (2002) PubMed:11927603

Subunit structure of a mammalian ER/Golgi SNARE complex. Xu D et al. J. Biol. Chem. (2000) PubMed:11035026

SNARE membrane trafficking dynamics in vivo. Chao DS et al. J. Cell Biol. (1999) PubMed:10085287

Localization, dynamics, and protein interactions reveal distinct roles for ER and Golgi SNAREs. Hay JC et al. J. Cell Biol. (1998) PubMed:9647643

Role of vesicle-associated syntaxin 5 in the assembly of pre-Golgi intermediates. Rowe T et al. Science (1998) PubMed:9445473

Access the online factsheet including applicable protocols at <https://sysy.com/product/170003> 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.