SYSY Antibodies

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Giantin

Cat.No. 263 004; Polyclonal Guinea pig antibody, 100 µl antiserum (lyophilized)

Data Sheet

Reconstitution/ Storage	100 µl antiserum, lyophilized. For **reconstitution** add 100 µl H_2O, then aliquot and store at -20°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) (see remarks) **IP**: not tested yet **ICC**: 1 : 500 **IHC**: 1 : 200 up to 1 : 500 **IHC-P (FFPE)**: 1 : 200 up to 1 : 500
Immunogen	Recombinant protein corresponding to AA 1 to 427 from rat Giantin (UniProt Id: G3V6A8)
Reactivity	Reacts with: rat, mouse. Other species not tested yet.
Remarks	**WB**: Due to the large size of this protein, we recommend NuPAGE 3-8% Tris-Acetate gels for SDS-PAGE.

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

Background

In eukaryotic cells the Golgi complex consists of stacked cisternae. **Giantin**, also referred to as **macrogolgin** or **p400**, is a single pass membrane protein involved in tethering these cisternae by cross-bridge formation. Its large cytoplasmic N-terminus is involved in the docking of COPI vesicles via p115 to the Golgi membrane.
Systemic lupus erythematosus and Sjögren's syndrome correlate with autoimmune antibodies against Golgi-compartment proteins with giantin being the most common autoantigen.

Selected References for 263 004

Golgi satellites are essential for polysialylation of NCAM and expression of LTP at distal synapses.
Andres-Alonso M, Borgmeyer M, Mirzapourdelavar H, Lormann J, Klein K, Schweizer M, Hoffmeister-Ullerich S, Oelschlegel AM, Dityatev A, Kreutz MR
Cell reports (2023) 427: 112692. . **ICC, IHC; tested species: mouse**

Regulation of dendrite morphology and excitatory synapse formation by zDHHC15.
Shah BS, Shimell JJ, Bamji SX
Journal of cell science (2019) 13213: . . **ICC; tested species: rat**

Selected General References

Giantin interacts with both the small GTPase Rab6 and Rab1.
Rosing M et al. Exp. Cell Res. (2007) PubMed:17475246

Giantin is the major Golgi autoantigen in human anti-Golgi complex sera.
Nozawa K et al. Arthritis Res. Ther. (2004) PubMed:15059272

The p115-interactive proteins GM130 and giantin participate in endoplasmic reticulum-Golgi traffic.
Alvarez C et al. J. Biol. Chem. (2001) PubMed:11035033

A role for giantin in docking COPI vesicles to Golgi membranes.
Sönnichsen B et al. J. Cell Biol. (1998) PubMed:9490716

Molecular genetic analyses of a 376-kilodalton Golgi complex membrane protein (giantin)
Seelig HP et al. Mol. Cell. Biol. (1994) PubMed:7511208

Giantin, a novel conserved Golgi membrane protein containing a cytoplasmic domain of at least 350 kDa.
Linstedt AD et al. Mol. Biol. Cell (1993) PubMed:7691276

Access the online factsheet including applicable protocols at https://sysy.com/product/263004 or scan the QR-code.

FAQ - How should I store my antibody?

Shipping Conditions

- All SYSY antibodies and control proteins/peptides are shipped lyophilized (vacuum freeze-dried). In this form, they remain stable 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. **Do not freeze lyophilized antibodies**. Temperatures below 0°C may impair performance.
- **Fluorescence-labeled antibodies** should be reconstituted immediately upon receipt. Long-term storage of lyophilized fluorophore-conjugates may cause aggregation.
- **Control peptides** should be stored at -20°C before reconstitution.

Long Term Storage after Reconstitution (General Considerations)

- **Do not use frost-free ("no-frost") freezers.** These units periodically warm to remove ice buildup, causing freeze–thaw cycles that can damage antibodies.
- Store vials in areas with minimal temperature fluctuation - preferably toward the back of the freezer, not on the door.
- Aliquot reconstituted antibodies and store at –20°C to –80°C.
- Avoid very small aliquots (<20 µL), as evaporation and adsorption to tube surfaces can reduce antibody concentration and activity.
- Use the smallest practical storage vial to minimize surface area.
- Adding glycerol to a final concentration of 50% prevents freezing at -20°C, allowing storage in liquid form and effectively avoiding freeze–thaw cycles.

Product Specific Hints for Storage

Control proteins / peptides

- Store at -20°C to -80°C

Monoclonal Antibodies

- **Ascites and hybridoma supernatant:** Store at -20°C to -80°C
  Prolonged storage at 4°C is not recommended, as proteases present in ascites may degrade antibodies.
- **Purified IgG:** Store at -20°C to -80°C
  Adding a carrier protein (e.g., BSA) enhances long-term stability.
  Many SYSY antibodies already contain carrier proteins - refer to the respective datasheet for details.

Polyclonal Antibodies

- **Crude antisera:** Can be stored at 4°C with antimicrobials added, but -20°C to -80°C is preferred
- **Affinity-purified antibodies:** Less stable than antisera; store at -20°C to -80°C
  Adding a carrier protein such as BSA improves long-term stability.
  Most SYSY antibodies already contain carrier proteins - refer to the respective datasheet for details.

Fluorescence-labeled Antibodies

- Store as a liquid with 1:1 (v/v) glycerol at -20°C, and protect from light exposure

Avoid repeated freeze-thaw cycles for all antibodies!

FAQ - How should I reconstitute my antibody?

Reconstitution

- All purified SYSY antibodies are lyophilized from PBS. To reconstitute the antibody in PBS, add the volume of deionized water specified in the corresponding datasheet. If a larger final volume is desired, first add the recommended amount of water, then adjust with PBS and, if needed, add a stabilizing carrier protein (e.g., BSA) to a final concentration of 2%. Some SYSY antibodies already contain albumin; please take this into account before adding additional carrier protein.

For complete reconstitution, carefully remove the vial cap. After adding water, briefly vortex the solution. To collect the liquid at the bottom of the vial, place the vial inside a 50 ml centrifuge tube padded with paper and centrifuge briefly.

- If desired, small amounts of azide or thimerosal may be added to prevent microbial growth. This is particularly recommended when storing an aliquot at 4°C.
- After reconstitution of fluorescence-labeled antibodies, add glycerol 1:1 (v/v) to achieve a final concentration of 50%. This prevents freezing at –20°C and keeps the antibody in liquid form, effectively avoiding freeze–thaw cycles.
- Glycerol may also be added to unlabeled primary antibodies as a general measure to prevent freeze–thaw damage.
- For further guidance, please refer to our **storage tips** and recommendations for reconstituted antibodies, control peptides, and control proteins.