SYSY Antibodies

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# Chromogranin A

**Cat.No. 259 003; 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 **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)<br>**IP**: not tested yet<br>**ICC**: 1 : 500<br>**IHC**: 1 : 500<br>**IHC-P (FFPE)**: 1 : 2000 up to 1 : 4000 |
| Immunogen | Recombinant protein corresponding to AA 348 to 463 from mouse Chromogranin A (UniProt Id: P26339) |
| Reactivity | Reacts with: rat (P10354), mouse (P26339), human (P10645).<br>Other species not tested yet. |
| Specificity | K.O. validated PubMed: 29178418 |
| Matching control | 259-0P |

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

## Background

**C**hromo**g**ranin **A** (**CgA**) and **B** (**CgB**) are members of a family of acidic proteins stored and released throughout the neuroendocrine system. The large dense core vesicle associated proteins have multiple functions in neurons and neuroendocrine cells. They are differentially processed in different tissues.
Chromogranin A (CgA) is the precursor for the bioactive peptides pancreastatin, vasostatins, catestatin, β-granin and WE-14.

## Selected References for 259 003

Localization, proteomics, and metabolite profiling reveal a putative vesicular transporter for UDP-glucose.
Qian C, Wu Z, Sun R, Yu H, Zeng J, Rao Y, Li Y
eLife (2021) 10: . . **WB, ICC; tested species: mouse**

Pool size estimations for dense-core vesicles in mammalian CNS neurons.
Persoon CM, Moro A, Nassal JP, Farina M, Broeke JH, Arora S, Dominguez N, van Weering JR, Toonen RF, Verhage M
The EMBO journal (2018) : . . **IHC; tested species: mouse**

Distinct Alterations in Dendritic Spine Morphology in the Absence of β-Neurexins.
Mohrmann L, Seebach J, Missler M, Rohlmann A
International journal of molecular sciences (2024) 252: . . **ICC; tested species: mouse**

High-throughput assay for regulated secretion of neuropeptides in mouse and human neurons.
Baginska U, Balagura G, Toonen RF, Verhage M
The Journal of biological chemistry (2024) : 107321. . **ICC; tested species: human**

Tomosyn affects dense core vesicle composition but not exocytosis in mammalian neurons.
Subkhangulova A, Gonzalez-Lozano MA, Groffen AJA, van Weering JRT, Smit AB, Toonen RF, Verhage M
eLife (2023) 12: . . **ICC; tested species: mouse**

Prion protein conversion at two distinct cellular sites precedes fibrillisation.
Ribes JM, Patel MP, Halim HA, Berretta A, Tooze SA, Klöhn PC
Nature communications (2023) 141: 8354. . **ICC; tested species: mouse**

A pan-tissue survey of mosaic chromosomal alterations in 948 individuals.
Gao T, Kastriti ME, Ljungström V, Heinzel A, Tischler AS, Oberbauer R, Loh PR, Adameyko I, Park PJ, Kharchenko PV
Nature genetics (2023) 5511: 1901-1911. . **IHC; tested species: human**

Differential axonal trafficking of Neuropeptide Y-, LAMP1-, and RAB7-tagged organelles in vivo.
Nassal JP, Murphy FH, Toonen RF, Verhage M
eLife (2022) 11: . . **ICC; tested species: mouse**

Deletion of β-Neurexins in Mice Alters the Distribution of Dense-Core Vesicles in Presynapses of Hippocampal and Cerebellar Neurons.
Ferdos S, Brockhaus J, Missler M, Rohlmann A
Frontiers in neuroanatomy (2021) 15: 757017. . **ICC; tested species: mouse**

Dense-core vesicle biogenesis and exocytosis in neurons lacking chromogranins A and B.
Dominguez N, van Weering JRT, Borges R, Toonen RFG, Verhage M
Journal of neurochemistry (2018) 1443: 241-254. . **WB; KO verified; tested species: mouse**

Newly produced synaptic vesicle proteins are preferentially used in synaptic transmission.
Truckenbrodt S, Viplav A, Jähne S, Vogts A, Denker A, Wildhagen H, Fornasiero EF, Rizzoli SO
The EMBO journal (2018) : . . **ICC; tested species: rat**

## Selected General References

The functional role of chromogranins in exocytosis.
Domínguez N et al. J. Mol. Neurosci. (2012) PubMed:22415354

Access the online factsheet including applicable protocols at https://sysy.com/product/259003 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.