SYSY Antibodies

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Chromogranin B

Cat.No. 259 103; 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) **IP**: not tested yet **ICC**: 1 : 500 **IHC**: 1 : 500 **IHC-P (FFPE)**: 1 : 500 up to 1 : 10000 **EM**: external data (see remarks)
Immunogen	Recombinant protein corresponding to AA 407 to 677 from mouse Chromogranin B (UniProt Id: P16014)
Reactivity	Reacts with: rat (O35314), mouse (P16014). Other species not tested yet.
Specificity	Specific chromogranin B. K.O. validated PubMed: 29178418
Matching control	259-1P
Remarks	**EM**: This antibody has been successfully applied and published for this method by customers (see application-specific references). This antibody has been successfully applied and published for this method by customers (see application-specific references).

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

Background

Chromo**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 259 103

Dominant Expression of Chromogranin B in Pituitary Corticotrophs and Its Putative Role in Interaction With Secretogranin III.
Kikuchi S, Odashima K, Yasui T, Torii S, Hosaka M, Gomi H
The journal of histochemistry and cytochemistry : official journal of the Histochemistry Society (2025) 731-2: 29-53. . **IHC, EM; tested species: mouse,rat**

The RAB3-RIM Pathway Is Essential for the Release of Neuromodulators.
Persoon CM, Hoogstraaten RI, Nassal JP, van Weering JRT, Kaeser PS, Toonen RF, Verhage M
Neuron (2019) 1046: 1065-1080.e12. . **WB, ICC; tested species: mouse**

CaMKII controls neuromodulation via neuropeptide gene expression and axonal targeting of neuropeptide vesicles.
Moro A, van Woerden GM, Toonen RF, Verhage M
PLoS biology (2020) 188: e3000826. . **WB, 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: mouse**

Synaptotagmin 9 Modulates Spontaneous Neurotransmitter Release in Striatal Neurons by Regulating Substance P Secretion.
Seibert MJ, Evans CS, Stanley KS, Wu Z, Chapman ER
The Journal of neuroscience : the official journal of the Society for Neuroscience (2023) 439: 1475-1491. . **ICC; tested species: mouse**

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**

Vti1a/b support distinct aspects of TGN and cis-/medial Golgi organization.
van Bommel DM, Toonen RF, Verhage M
Scientific reports (2022) 121: 20870. . **ICC; tested species: mouse**

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**

Single-cell transcriptomics of human embryos identifies multiple sympathoblast lineages with potential implications for neuroblastoma origin.
Kameneva P, Artemov AV, Kastriti ME, Faure L, Olsen TK, Otte J, Erickson A, Semsch B, Andersson ER, Ratz M, Frisén J, et al.
Nature genetics (2021) 535: 694-706. . **IHC; tested species: mouse**

The phosphoprotein Synapsin Ia regulates the kinetics of dense-core vesicle release.
Yang HJ, Chen PC, Huang CT, Cheng TL, Hsu SP, Chen CY, Lu JC, Wang CT
The Journal of neuroscience : the official journal of the Society for Neuroscience (2021) : . . **ICC; tested species: rat**

Dynamin controls neuropeptide secretion by organizing dense-core vesicle fusion sites.
Moro A, van Nifterick A, Toonen RF, Verhage M
Science advances (2021) 721: . . **ICC; tested species: mouse**

Fbxo41 Promotes Disassembly of Neuronal Primary Cilia.
King CR, A A Quadros AR, Chazeau A, Saarloos I, van der Graaf AJ, Verhage M, Toonen RF
Scientific reports (2019) 91: 8179. . **ICC; tested species: mouse**

Access the online factsheet including applicable protocols at https://sysy.com/product/259103 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.