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) **IP**: not tested yet **ICC**: 1 : 500 **IHC**: 1 : 500 **IHC-P**: 1 : 200 up to 1 : 2000
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). 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

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 259 003

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**

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, Estévez-Herrera J, Pardo MR, Pereda D, Machado JD, Borges R
Journal of molecular neuroscience : MN (2012) 482: 317-22. .

A distinct trans-Golgi network subcompartment for sorting of synaptic and granule proteins in neurons and neuroendocrine cells.
Park JJ, Gondré-Lewis MC, Eiden LE, Loh YP
Journal of cell science (2011) 124Pt 5: 735-44. .

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 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.