SYSY Antibodies

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Chromogranin A

Cat.No. 259-0P; control protein, 100 µg protein (lyophilized)

Data Sheet

Reconstitution/ Storage	100 µg protein, lyophilized. For **reconstitution** add 100 µl H_2O to get a 1mg/ml solution in TBS. Then aliquot and store at -20°C to -80°C until use. Control proteins should be stored at +4°C when still lyophilized. Do not freeze! For detailed information, see back of the data sheet.
Immunogen	Recombinant protein corresponding to AA 348 to 463 from mouse Chromogranin A (UniProt Id: P26339)
Recommended dilution	Optimal concentrations should be determined by the end-user.
Matching antibodies	259 002, 259 003
Remarks	This control protein consists of the recombinant protein (aa 348-463 of mouse chromogranin A) that has been used for immunization. It has been tested in preadsorption experiments and blocks efficiently and specifically the corresponding signal in Western blots. The amount of protein needed for efficient blocking depends on the titer and on the affinity of the antibody to the antigen.

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 General References

The functional role of chromogranins in exocytosis.
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Chromogranin B gene ablation reduces the catecholamine cargo and decelerates exocytosis in chromaffin secretory vesicles.
Díaz-Vera J et al. J. Neurosci. (2010) PubMed:20089903

Cellular distribution of chromogranin A in excitatory, inhibitory, aminergic and peptidergic neurons of the rodent central nervous system.
Schafer MK et al. Regul. Pept. (2010) PubMed:20005907

Chromogranins A and B as regulators of vesicle cargo and exocytosis.
Machado JD et al. Cell. Mol. Neurobiol. (2010) PubMed:21046455

The crucial role of chromogranins in storage and exocytosis revealed using chromaffin cells from chromogranin A null mouse.
Montesinos MS et al. J. Neurosci. (2008) PubMed:18367602

Chromogranin A, an "on/off" switch controlling dense-core secretory granule biogenesis.
Kim T et al. Cell (2001) PubMed:11525735

Chromogranin B (secretogranin I), a neuroendocrine-regulated secretory protein, is sorted to exocrine secretory granules in transgenic mice.
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Rat brain: distribution of immunoreactivity of PE-11, a peptide derived from chromogranin B.
Kroesen S et al. Eur. J. Neurosci. (1996) PubMed:8996818

Structure and function of the chromogranin A gene. Clues to evolution and tissue-specific expression.
Wu HJ et al. J. Biol. Chem. (1991) PubMed:2071596

The primary structure of bovine chromogranin A: a representative of a class of acidic secretory proteins common to a variety of peptidergic cells.
Benedum UM et al. EMBO J. (1986) PubMed:3755681

Access the online factsheet including applicable protocols at https://sysy.com/product/259-0P 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.