SYSY Antibodies

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Ghrelin

Cat.No. 468 003; 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**: not tested yet **IP**: not tested yet **ICC**: not tested yet **IHC**: 1 : 500 **IHC-P (FFPE)**: 1 : 200 up to 1 : 1000
Immunogen	Synthetic octanoylated Ghrelin peptide corresponding to AA 24 to 51 from mouse Ghrelin precursor (UniProt Id: Q9EQX0). (UniProt Id: Q9EQX0)
Reactivity	Reacts with: mouse (Q9EQX0), rat (Q9QYH7). Other species not tested yet.
Specificity	The antibody is specific for Ghrelin. It may crossreact with the unprocessed precursor protein.

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

Background

Ghrelin is an orexigenic peptide hormone belonging to the motilin family. It is a well conserved 28 amino acid peptide generated by post-translational cleavage of the preproghrelin precursor protein (1).
Ghrelin is produced predominantly by endocrine X/A-like cells of the stomach submucosa, from where it is secreted into the plasma (1). It is also present in other parts of the gastrointestinal tract, while substantially lower amounts derive from other tissues including the pancreas. In pancreatic islets, ghrelin producing epsilon cells are primarily found during gestational development (2,3). After birth, epsilon cell numbers gradually decline (2,3).
Ghrelin circulates in two major forms: acyl-ghrelin, which possesses an n-octanoyl modification at Ser3, and des-acyl ghrelin without this modification (1). Des-acyl ghrelin is the predominant circulating form of ghrelin, although the lipid modification is required for binding to the growth hormone secretagogue receptor GHSR, which induces growth hormone release from the pituitary gland (1,3).
Ghrelin has an appetite stimulating effect, induces adiposity, and it regulates gastric acid secretion, gastrointestinal motility, and pancreatic glucose-stimulated insulin secretion. It also plays a crucial role in cardioprotection, muscle atrophy, bone metabolism and cancer (3,4).
Inhibitors of ghrelin have attracted enormous interest as potential anti-obesity therapeutic targets (5).

Selected General References

Ghrelin is a growth-hormone-releasing acylated peptide from stomach.
Kojima M et al. Nature (1999) PubMed:10604470

Ghrelin: much more than a hunger hormone.
Pradhan G et al. Curr Opin Clin Nutr Metab Care (2013) PubMed:24100676

Role of SST, CORT and ghrelin and its receptors at the endocrine pancreas.
Chanclón B et al. Front Endocrinol (Lausanne) (2012) PubMed:23162532

Ontogeny of ghrelin, obestatin, preproghrelin, and prohormone convertases in rat pancreas and stomach.
Walia P et al. Pediatr Res (2009) PubMed:18784614

Emerging therapeutic strategies for obesity.
Foster-Schubert KE et al. Endocr Rev (2006) PubMed:17122357

Access the online factsheet including applicable protocols at https://sysy.com/product/468003 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.