SYSY Antibodies

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GLP-2

Cat.No. 471 203; 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 **Dot blot**: 1 : 1000 (AP staining) (see remarks) **IP**: not tested yet **ICC**: not tested yet **IHC**: 1 : 1000 up to 1 : 2000 **IHC-P (FFPE)**: 1 : 1000 up to 1 : 4000
Immunogen	Synthetic peptide comprising almost all of the processed mouse GLP-2 (UniProt Id: P55095)
Reactivity	Reacts with: mouse (P55095), rat (P06883). Other species not tested yet.
Specificity	The antibody recognizes GLP-2. It may show cross-reactivity with the unprocessed precursor protein, but it does not detect GLP-1.
Remarks	**Dot blot**: This application was tested with synthetic peptides only.

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

Background

Glucagon-like peptide-2 (GLP-2) is a 33-amino acid peptide generated by tissue-specific posttranslational processing of the proglucagon precursor. It is primarily secreted by enteroendocrine L cells located in the distal small intestine and colon, and in much smaller quantities from certain neurons in the brainstem and the hypothalamus. Its secretion is stimulated by nutrient ingestion, especially fats and carbohydrates (1-3).
GLP-2 exerts its effects via interaction with its specific G-protein-coupled receptor GLP-2R (1). GLP-2R can couple to different G-protein subunits to activate multiple signalling pathways (4).
The actions of GLP-2 in the gastrointestinal tract include promotion of intestinal growth, stimulation of nutrient absorption, improvement in intestinal barrier function and suppression of gastric emptying. Further, GLP-2 increases intestinal blood flow, and it has anti-inflammatory effects (3,4).
GLP-2 has been identified as a promising target for gastrointestinal diseases, such as short bowel syndrome (SBS), inflammatory bowel disease, and chemotherapy-induced mucositis, and GLP-2 analogues have been developed for treatment of SBS (1-4).

Selected General References

Targeting the GLP-2 receptor in the management of obesity.
Pálsson TG et al. Peptides (2024) PubMed:38579917

GLP-2 regulation of intestinal lipid handling.
Mukherjee K et al. Front Physiol (2024) PubMed:38426205

GLP-1 and GLP-2 Orchestrate Intestine Integrity, Gut Microbiota, and Immune System Crosstalk.
Abdalqadir N et al. Microorganisms (2022) PubMed:36296337

GLP-2: what do we know? What are we going to discover?
Baldassano S et al. Regul Pept (2014) PubMed:25218018

Access the online factsheet including applicable protocols at https://sysy.com/product/471203 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.