SYSY
Antibodies

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Membrane Protein Extraction Kit

MemEx

Cat.No. 800-MXK; , 1 kit

Data Sheet

Reconstitution/ Storage	**Content** 800-MXK A: SySy MemEx reagent A, 10 ml 800-MXK B: SySy MemEx reagent B, 30 ml 800-MXK C: SySy MemEx reagent C, 10 ml 800-MXK D: SySy MemEx dye, 300 µl. Reagents are sufficient for 130 extractions of up to 300 µg protein. For detailed information, see back of the data sheet.
Storage	Product is shipped at ambient temperature. Store at 4°C upon receipt. Reagent A appears cloudy at RT. Storage at 4°C will clarify the solution. Keep reagent A at 4°C or on ice at all times during usage of the kit. Reagent C precipitates at 4°C and should be dissolved by warming before use.
Applications	**ICC**: (see remarks)
Gallery Membrane protein fractionation from rat brain	blot Quantification
Gallery Membrane protein fractionation from 3T3 cells	blot Quantification
Shelf life	6 months
Remarks	**ICC**: This antibody can only be used for labeling of recycling synaptic vesicles in living neurons. It is not recommended for the staining of fixed cells.

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

Background

SySy MemEx employs a detergent-based temperature-dependent phase separation to enrich membrane proteins from mammalian tissue or cell homogenates. By this simple and rapid procedure you obtain a rather pure, non-denatured membrane protein fraction from any chosen protein homogenate. Most membrane proteins partition to the detergent phase with 80-90% efficiency, while the soluble proteins generally remain in the aqueous phase.
Depending on the starting material, the membrane proteins in the detergent phase will constitute 15-25% of input protein, thus being separated from many contaminating soluble proteins and other water-soluble compounds. Proteins with a very low expression level like Cellubrevin may become accessible to analysis only after enrichment. Abundant proteins like Tubulin or Synaptotagmin 1 can be found in both phases and may need a second round of extraction for complete purification. However, each protein shows individual behaviour depending on hydrophobicity and interactions with other (hydrophobic) proteins.
The membrane proteins isolated by SySy MemEx Kit are suitable for downstream applications like activity assays, immunoprecipitation, proteomic analysis or SDS-PAGE/western blotting. If the detergent should interfere with analysis, it can be removed by protein precipitation (denaturing) or dialysis against 0.5 % CHAPS in a suitable buffer (native; CHAPS can later be exchanged with other detergents).

[[800-MXK-schema.jpg]]

Access the online factsheet including applicable protocols at https://sysy.com/product/800-MXK 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.