SYSY Antibodies

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mCLING labeling kit

Cat.No. 710-MCK; , 50 nmol mCling

Data Sheet

Reconstitution/ Storage	**Content:** 710-MCK A: unlabeled mCling, 50 nmol (lyophilized) 710-MCK B: mCLING purification column 710-MCK C: Washing buffer, 10 ml 710-MCK D: Stop solution, 0.5 ml 710-MCK E: Elution buffer, 1 ml 710-MCK F: Neutralization buffer, 0.5 ml For detailed information, see back of the data sheet.
Storage	All components of the kit are stable at 2-8°C. Shelf life before use: 6 months.
Remarks	Due to the positive charge of mCLING, negatively charged coatings of cover-slips should be avoided. We recommend a positively charged coating like poly-L-lysine (PLL). mCLING is a fixable dye, but paraformaldehyde alone is not able to fix this molecule sufficiently. Therefore, a mixture of 4 %paraformaldehyde (PFA) and 0.2 % glutaraldehyde is strongly advised. For detailed protocols see Revelo NH & Rizzoli SO, 2016. Only hydrophilic dyes are suitable for effective coupling. Since the dye itself can have an impact on the mCling properties, full functionality of the resulting conjugate cannot be guaranteed.

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

Background

The **m**embrane-binding fluorophore-**c**ysteine-**l**ys**in**e-palmtoyl **g**roup (**mCLING**) is a new probe that selectively binds to the plasma membrane. It is taken up during endocytosis and, in contrast to conventional membrane dyes, remains attached to membranes after fixation and permeabilization and can therefore be combined with immunostaining and super-resolution microscopy.
mCLING was used so far in mammalian-cultured cells, yeast, bacteria, primary cultured neurons, Drosophila melanogaster larval neuromuscular junctions, and mammalian tissue.

Selected References for 710-MCK

Dense small molecule labeling enables activator-dependent STORM by proximity mapping.
Chen Y, Gu M, Gunning PW, Russell SM
Histochemistry and cell biology (2016) 1463: 255-66. . **ICC; tested species: human**

Selected General References

Nanoscale architecture of the Schizosaccharomyces pombe contractile ring.
McDonald NA et al. Elife (2017) PubMed:28914606

SWAP70 Organizes the Actin Cytoskeleton and Is Essential for Phagocytosis.
Baranov MV et al. Cell Rep (2016) PubMed:27806292

The Membrane Marker mCLING Reveals the Molecular Composition of Trafficking Organelles.
Revelo NH et al. Curr Protoc Neurosci (2016) PubMed:26729031

A new probe for super-resolution imaging of membranes elucidates trafficking pathways.
Revelo NH et al. J. Cell Biol. (2014) PubMed:24862576

Access the online factsheet including applicable protocols at https://sysy.com/product/710-MCK 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.