SYSY Antibodies

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Ki67 human specific

Cat.No. 398 003; Polyclonal rabbit antibody, 200 µl specific antibody (lyophilized)

Data Sheet

Reconstitution/ Storage	200 µl specific antibody, lyophilized. Affinity purified with the immunogen. Albumin and azide were added for stabilization. For **reconstitution** add 200 µl H_2O. 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.
Concentration	0.1 mg/ml
Applications	**WB**: not tested yet **IP**: not tested yet **ICC**: not tested yet **IHC**: not tested yet **IHC-P (FFPE)**: 1 : 100
Immunogen	Synthetic peptide corresponding to AA 1251 to 1271 from human Ki67 (UniProt Id: P46013)
Reactivity	Reacts with: human (P46013). No signal: mouse (E9PVX6), pig. Other species not tested yet.

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

Background

Expression of the nuclear protein **Ki 67** is strictly associated with cell proliferation and preferentially expressed during the late G1, S, G2 and M phases of the cell cycle. Resting cells (G0 phase) lack Ki 67 expression .
Immunohistochemical detection of Ki 67 is a simple and reproducible method to determine the tumour proliferative index and is a predictive and prognostic biomarker in certain types of human cancer, such as breast cancer, gastric cancer or prostate cancer. Moreover, higher Ki 67 scores may be associated with increased tumor sensitivity to radiation therapy and chemotherapy.
In preclinical and clinical studies Ki 67 expression is used as a pharmacodynamic biomarker. Absence of a decrease in Ki 67 early in treatment might be predictive of therapeutic failure.

Selected References for 398 003

Integrin-targeting cyclic peptides suppress TGF-β1-driven EMT and invasion in third-generation EGFR-TKI-resistant NSCLC.
Seo J, Kim J
Chemico-biological interactions (2026) 434: 112117. . **IHC; tested species: human**

Selected General References

Clinical predictors of pathological complete response to neoadjuvant chemotherapy in triple-negative breast cancer.
Nakashoji A et al. Oncol Lett (2017) PubMed:28943920

Prognostic role of Ki-67 score in localized prostate cancer: A systematic review and meta-analysis.
Berlin A et al. Urol. Oncol. (2017) PubMed:28648414

Immunohistochemical analysis of PTEN, HER2/neu, and ki67 expression in patients with gastric cancer and their association with survival.
Badary DM et al. Pathophysiology (2017) PubMed:28262306

Correlation between the Ki-67 proliferation index and response to radiation therapy in small cell lung cancer.
Ishibashi N et al. Radiat Oncol (2017) PubMed:28086989

Comparative study of two complementary proliferation markers in 200 breast carcinomas: Ki67 and mitotic index.
El Amine O et al. Tunis Med (2016) PubMed:28972249

Ki-67 is a prognostic parameter in breast cancer patients: results of a large population-based cohort of a cancer registry.
Inwald EC et al. Breast Cancer Res. Treat. (2013) PubMed:23674192

Assessment of Ki67 in breast cancer: recommendations from the International Ki67 in Breast Cancer working group.
Dowsett M et al. J. Natl. Cancer Inst. (2011) PubMed:21960707

Clinical significance of Ki-67 in neoadjuvant chemotherapy for primary breast cancer as a predictor for chemosensitivity and for prognosis.
Nishimura R et al. Breast Cancer (2010) PubMed:19730975

The Ki-67 protein: from the known and the unknown.
Scholzen T et al. J. Cell. Physiol. (2000) PubMed:10653597

The prognostic value of Ki67 immunostaining in non-Hodgkin's lymphoma.
Hall PA et al. J. Pathol. (1988) PubMed:2450981

Access the online factsheet including applicable protocols at https://sysy.com/product/398003 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.