SYSY Antibodies

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# **CD8a** mouse specific

**Cat.No. HS-361 017; Monoclonal rat antibody, 200 µl purified IgG (lyophilized)**

## Data Sheet

| | |
|---|---|
| Reconstitution/ Storage | 200 µl purified IgG, lyophilized. Albumin and azide were added for stabilization.<br>For **reconstitution** add 200 µl $H_2O$. Then aliquot and store at -20°C to -80°C until use.<br>Antibodies should be stored at +4°C when still lyophilized. Do not freeze!<br>For detailed information, see back of the data sheet. |
| Concentration | 0.5 mg/ml |
| Applications | **WB**: 1 : 500 (AP staining)<br>**IP**: not tested yet<br>**IHC**: not tested yet<br>**IHC-P (FFPE)**: 1 : 100<br>**IHC-Fr**: 1 : 200 (see remarks) |
| Clone | GHH8/321E9 |
| Subtype | IgG2a |
| Immunogen | Synthetic peptide corresponding to AA 230 to 247 from mouse CD8a (UniProt Id: P01731) |
| Reactivity | Reacts with: mouse (P01731).<br>No signal: human, rat.<br>Other species not tested yet. |
| Remarks | **IHC-Fr**: 4% formaldehyde/PFA fixation is recommended. |

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

## Background

CD 8 is a heterodimeric T-cell surface glycoprotein that consists of a **CD 8a** (alpha) and beta chain. It identifies cytotoxic/suppressor T-cells that interact with MHC class I bearing targets. CD 8 is thought to play a role in the process of T-cell mediated killing. CD 8 alpha chains binds to class I MHC molecules alpha-3 domains.

## Selected References for HS-361 017

Helicobacter pylori γ-glutamyl transferase contributes to colonization and differential recruitment of T cells during persistence.
Wüstner S, Anderl F, Wanisch A, Sachs C, Steiger K, Nerlich A, Vieth M, Mejías-Luque R, Gerhard M
Scientific reports (2017) 71: 13636. . **IHC-P; tested species: mouse**

Systemic Inactivation of TREX1 Induces Selective Inflammation of the Tumor Microenvironment and Invigorated T-cell-Mediated Tumor Control.
Marinkovic E, Chen M, Schubert N, Dogan Dar E, Poth T, Leung JY, Lohre J, Sahni JM, Tun C, Rajeswaran P, Mehlo-Jensen T, et al.
Cancer research (2025) 8515: 2876-2889. . **IHC-P; tested species: mouse**

Impact of Chemical-Induced Mutational Load Increase on Immune Checkpoint Therapy in Poorly Responsive Murine Tumors.
Kuczynski EA, Krueger J, Chow A, Xu P, Man S, Sundaravadanam Y, Miller JK, Krzyzanowski PM, Kerbel RS
Molecular cancer therapeutics (2018) 174: 869-882. . **IHC-P; tested species: mouse**

## Selected General References

Cutting Edge: Resident Memory CD8 T Cells Express High-Affinity TCRs.
Frost EL et al. J. Immunol. (2015) PubMed:26371252

New insights on the role of CD8(+)CD57(+) T-cells in cancer.
Wu RC et al. Oncoimmunology (2012) PubMed:23162769

Mice lacking CD8+ T cells develop greater numbers of IgA-producing cells in response to a respiratory virus infection.
Hyland L et al. Virology (1994) PubMed:8091654

CD4 and CD8 subsets defined by dual-color cytofluorometry which distinguish symptomatic from asymptomatic blood donors seropositive for human immunodeficiency virus.
Prince HE et al. Diagn Clin Immunol (1987) PubMed:2962780

Isolation of pure functionally active CD8+ T cells. Positive selection with monoclonal antibodies directly conjugated to monosized magnetic microspheres.
Gaudernack G et al. J. Immunol. Methods (1986) PubMed:3088118

Function of the CD4 and CD8 molecules on human cytotoxic T lymphocytes: regulation of T cell triggering.
Fleischer B et al. J. Immunol. (1986) PubMed:2419409

Access the online factsheet including applicable protocols at https://sysy.com/product/HS-361017 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.