SYSY Antibodies

Rudolf-Wissell-Str. 28a
37079 Göttingen, Germany
Phone: +49 551-50556-0
Fax: +49 551-50556-384
E-mail: sales@sysy.com
Web: www.sysy.com

# CD73 (NT5E) mouse specific

**Cat.No. HS-492 003; Polyclonal rabbit antibody, 50 µg specific antibody (lyophilized)**

## Data Sheet

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|---|---|
| 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 recommended<br>**IP**: not tested yet<br>**ICC**: not tested yet<br>**IHC**: 1 : 500 (see remarks)<br>**IHC-P (FFPE)**: 1 : 250 up to 1 : 1000 |
| Immunogen | Synthetic peptide corresponding to residues surrounding AA 310 of mouse CD73 (UniProt Id: Q61503) |
| Reactivity | Reacts with: mouse (Q61503).<br>No signal: human (P21589), rat.<br>Other species not tested yet. |
| Remarks | **IHC**: Antigen retrieval with citrate buffer pH 6 is required. |

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

## Background

CD73, also known as NT5E (ecto-5□-nucleotidase), is a cell surface ectoenzyme involved in the conversion of ATP to extracellular adenosine together with CD39 (ENTPD1, ecto-nucleoside triphosphate diphosphohydrolase). CD39 degrades extracellular ATP to AMP, thereby providing the substrate for the conversion of AMP to adenosine by CD73 (1). ATP is present in high concentrations inside cells and is released from damaged cells into the extracellular space during tissue injury or inflammation, where it acts as “danger signal”. In contrast, extracellular adenosine mainly mediates anti-inflammatory effects (1). CD73 is expressed by several cell types, including T and B cell subsets, endothelial cells, and epithelial cells. Among T cells, CD73 is mainly expressed by regulatory T cells (Tregs), which mediate immune suppressive actions against dendritic cells, monocytes and effector T cells (2). In solid human tumors, high CD73 expression has been found to be closely associated with tumor invasiveness and metastasis. CD73 has recently shown promise as a target for novel immunotherapies (3).

## Selected General References

CD73 and adenosine generation in the creation of regulatory microenvironments.
Regateiro FS et al. Clin Exp Immunol (2013) PubMed:23199317

The Multifaceted Actions of CD73 During Development and Suppressive Actions of Regulatory T Cells.
Da M et al. Front Immunol (2022) PubMed:35711418

Targeting CD73 to augment cancer immunotherapy.
Roh M et al. Curr Opin Pharmacol (2020) PubMed:32777746

Access the online factsheet including applicable protocols at https://sysy.com/product/HS-492003 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.