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

CD4 mouse specific

Cat.No. 360 117; Monoclonal rat antibody, 200 µl purified IgG (lyophilized)

Data Sheet

Reconstitution/ Storage	200 µl purified IgG, lyophilized. 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.
Applications	**WB**: 1 : 1000 (AP staining) **IP**: not tested yet **ICC**: not tested yet **IHC**: 1 : 100 (see remarks) **IHC-P (FFPE)**: 1 : 100 **IHC-Fr**: 1 : 100 (see remarks)
Clone	78H9D2
Subtype	IgG2b (κ light chain)
Immunogen	Recombinant protein corresponding to AA 27 to 394 from mouse CD4 (UniProt Id: P06332)
Reactivity	Reacts with: mouse (P06332). No signal: human (P01730), rat (P05540). Other species not tested yet.
Remarks	**IHC**: Antigen retrieval with citrate buffer pH 6 is required. **IHC-Fr**: The following fixatives are possible: methanol, 4% formaldehyde/PFA.

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

Background

CD4 (**c**luster of **d**ifferentiation **4**) is a glycoprotein found on the surface of immune cells such as T helper cells, monocytes, macrophages, and dendritic cells.
CD4 is a co-receptor that assists the T-cell receptor (TCR) in communicating with an antigen-presenting cell.

Selected References for 360 117

INSIHGT: an accessible multi-scale, multi-modal 3D spatial biology platform.
Yau CN, Hung JTS, Campbell RAA, Wong TCY, Huang B, Wong BTY, Chow NKN, Zhang L, Tsoi EPL, Tan Y, Li JJX, et al.
Nature communications (2024) 151: 10888. . **IHC; tested species: mouse**

An Enhancer Variant Associated with Breast Cancer Susceptibility in Black Women Regulates TNFSF10 Expression and Antitumor Immunity in Triple-Negative Breast Cancer.
Han YJ, Zhang J, Hardeman A, Liu M, Karginova O, Romero R, Khramtsova GF, Zheng Y, Huo D, Olopade OI
Human molecular genetics (2022) : . . **IHC-P; tested species: mouse**

CDK4/6 inhibitors synergize with radiotherapy to prime the tumor microenvironment and enhance the antitumor effect of anti-PD-L1 immunotherapy in triple-negative breast cancer.
Yang WC, Wei MF, Shen YC, Huang CS, Kuo SH
Journal of biomedical science (2025) 321: 79. . **IHC-P; tested species: mouse**

Selected General References

A gene-rich cluster between the CD4 and triosephosphate isomerase genes at human chromosome 12p13.
Ansari-Lari MA et al. Genome Res. (1996) PubMed:8723724

Crystal structure of domains 3 and 4 of rat CD4: relation to the NH2-terminal domains.
Brady RL et al. Science (1993) PubMed:8493535

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

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/360117 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.