

Rudolf-Wissell-Str. 28a 37079 Göttingen, Germany

Phone: +49 551-50556-0
Fax: +49 551-50556-384
E-mail: sales@sysy.com
Web: sysy-histosure.com

CD19 mouse specific

Cat.No. HS-439 017; Monoclonal rat antibody, 100 µg purified IgG (lyophilized)

Data Sheet

Reconstitution/ Storage	100 μg purified IgG, lyophilized. Albumin and azide were added for stabilization. For reconstitution add 100 μl H ₂ O 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: 1: 250 (AP staining) IP: not tested yet IHC: 1: 200 IHC-P: 1: 100 IHC-Fr: 1: 200 (see remarks)
Clone	26D7E5
Subtype	IgG2b (κ light chain)
Immunogen	Synthetic peptide corresponding to residues near the carboxy terminus of mouse CD19 (UniProt Id: P25918)
Reactivity	Reacts with: mouse (P25918). No signal: human (P15391), rat. Other species not tested yet.
Remarks	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

CD19 (Cluster of Differentiation 19) is a B cell-restricted signal-transduction molecule that plays an important role in the regulation of development, activation, and differentiation of B-lymphocytes. CD19 is considered as a biomarker for B-cells because of its continued expression from very early B cell development stages, being evident already on pro-B cells and on all later B cell stages, until plasma cell terminal differentiation, when its expression is lost. In complex with CD21 (complement receptor-2), CD81 and CD225 (Leu-13), CD19 functions as a dominant signaling receptor on the surface of mature B cells (1). CD19 is instrumental in B cell homeostasis and lowers the threshold of B cell receptor crosslinking necessary to effect B-cell activation and sustain proliferation upon antigen encounter (2). Dysregulated CD19 expression has been implicated in several autoimmune diseases and CD19 is expressed in most acute lymphoblastic leukemias (ALL), chronic lymphocytic leukemias (CLL) and other B cell lymphomas (3). Therefore, CD19 has gained attention as a potential target in the therapy of B-cell malignancies (4).

Selected General References

CD19: a biomarker for B cell development, lymphoma diagnosis and therapy. Wang K et al. Exp Hematol Oncol (2012) PubMed:23210908

CD19, from bench to bedside.

Li X et al. Immunol Lett (2017) PubMed:28153605

CD19: A multifunctional immunological target molecule and its implications for Blineage acute lymphoblastic leukemia. Weiland J et al. Pediatr Blood Cancer (2015) PubMed:25755168

CD19 function in central and peripheral B-cell development. Del Nagro CJ et al. Immunol Res (2005) PubMed:15778510

Access the online factsheet including applicable protocols at https://sysy-histosure.com/product/HS-439017 or scan the OR-code.



FAQ - How should I store my antibody?

Shipping Conditions

 All our antibodies and control proteins / peptides are shipped lyophilized (vacuum freezedried) and are stable in this form 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. They must not be stored in the freezer when still lyophilized!
 Temperatures below zero may cause loss of performance.
- Fluorescence-labeled antibodies should be reconstituted immediately upon receipt. Long term storage (several months) may lead to aggregation.
- **Control peptides** should be kept at -20°C before reconstitution.

Long Term Storage after Reconstitution (General Considerations)

- The storage freezer must not be of the frost-free variety ("no-frost freezer"). This cycle
 between freezing and thawing (to reduce frost-build-up), which is exactly what should be
 avoided. For the same reason, antibody vials should be placed in an area of the freezer that
 has minimal temperature fluctuations, for instance towards the back rather than on a door
 shelf.
- Aliquot the antibody and store frozen (-20°C to -80°C). Avoid very small aliquots (below 20 µl)
 and use the smallest storage vial or tube possible. The smaller the aliquot, the more the stock
 concentration is affected by evaporation and adsorption of the antibody to the surface of the
 storage vial or tube. Adsorption of the antibody to the surface leads to a substantial loss of
 activity.
- The addition of glycerol to a final concentration of 50% lowers the freezing point of your stock and keeps your antibody at -20°C in liquid state. This efficiently avoids freeze and thaw cycles.

Product Specific Hints for Storage

Control proteins / peptides

• Store at -20°C to -80°C.

Monoclonal Antibodies

- Ascites and hybridoma supernatant should be stored at -20°C up to -80°C. Prolonged storage at 4°C is not recommended! Unlike serum, ascites may contain proteases that will degrade the antibodies.
- **Purified IgG** should be stored at -20°C up to -80°C. Adding a carrier protein like BSA will increase long term stability. Many of our antibodies already contain carrier proteins. Please refer to the data-sheet for detailed information.

Polyclonal Antibodies

- Crude antisera: With anti-microbials added, they may be stored at 4°C. However, frozen storage (-20°C up to -80°C) is preferable.
- Affinity purified antibodies: Less robust than antisera. Storage at -20°C up to -80°C is
 recommended. Adding a carrier protein like BSA will increase long term stability. Most of our
 antibodies already contain carrier proteins. Please refer to the data-sheet for detailed
 information.

Fluorescence-labeled Antibodies

• Store as a liquid with 1:1 (v/v) glycerol at -20°C. Protect these antibodies from light exposure.

Avoid repeated freeze-thaw cycles for all antibodies!

FAQ - How should I reconstitute my antibody?

Reconstitution

- All our purified antibodies are lyophilized from PBS. To reconstitute the antibody in PBS, add
 the amount of deionized water given in the respective datasheet. If higher volumes are
 preferred, add water as mentioned above and then the desired amount of PBS and a
 stabilizing carrier protein (e.g. BSA) to a final concentration of 2%. Some of our antibodies
 already contain albumin. Take this into account when adding more carrier protein.
 For complete reconstitution, carefully remove the lid. After adding water, briefly vortex the
 solution. You can spin down the liquid by placing the vial into a 50 ml centrifugation tube filled
 with paper.
- If desired, add small amounts of azide or thimerosal to prevent microbial growth. This is especially recommended if you want to keep an aliquot a 4°C.
- After reconstitution of fluorescence-labeled antibodies, add 1:1 (v/v) glycerol to a final
 concentration of 50%. This lowers the freezing point of your stock and keeps your antibody in
 liquid state at -20°C.
- Glycerol may also be added to unlabeled primary antibodies. It is a suitable way to avoid freezethaw cycles.
- Please refer to our tips and hints for subsequent storage of reconstituted antibodies and control peptides and proteins.