

CD19

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. For detailed information, see back of the data sheet.
Applications	WB: 1 : 250 IHC: 1 : 200 IHC-P/FFPE: 1 : 100
Clone	26D7E5
Subtype	IgG2b (κ light chain)
Epitop	Epitop: AA 527 to 547 from mouse CD19 (UniProt Id: P25918)
Reactivity	Reacts with: mouse (P25918). No signal: human (P15391). Other species not tested yet.
Specificity	Specific for mouse CD19 without cross-reactivity to human CD19

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

Access the online factsheet including applicable protocols at <https://susy-histosure.com/product/HS-439017> or scan the QR-code.



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. It is 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, CD81 and CD225, CD19 functions as a dominant signaling receptor on the surface of mature B cells. CD19-deficient mice show defects in initial B-cell activation by T-cell-dependent antigens and in the maturation and/or selection of the activated cells into the memory compartment.

Selected General References

- Abnormal B lymphocyte development, activation, and differentiation in mice that lack or overexpress the CD19 signal transduction molecule.
Engel P, Zhou LJ, Ord DC, Sato S, Koller B, Tedder TF
Immunity (1995) 31: 39-50. .
- CD19: a biomarker for B cell development, lymphoma diagnosis and therapy.
Wang K, Wei G, Liu D
Experimental hematology & oncology (2012) 11: 36. .
- CD19 function in early and late B cell development. II. CD19 facilitates the pro-B/pre-B transition.
Otero DC, Rickert RC
Journal of immunology (Baltimore, Md. : 1950) (2003) 17111: 5921-30. .
- Impairment of T-cell-dependent B-cell responses and B-1 cell development in CD19-deficient mice.
Rickert RC, Rajewsky K, Roes J
Nature (1995) 3766538: 352-5. .
- Expression of human B cell-associated antigens on leukemias and lymphomas: a model of human B cell differentiation.
Anderson KC, Bates MP, Slaughenhaupt BL, Pinkus GS, Schlossman SF, Nadler LM
Blood (1984) 636: 1424-33. .

FAQ - How should I store my antibody?

Shipping Conditions

- All our antibodies and control proteins / peptides are shipped lyophilized (vacuum freeze-dried) 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 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 freeze-thaw cycles.
- Please refer to our **tips and hints for subsequent storage** of reconstituted antibodies and control peptides and proteins.