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Galectin-3 mouse specific

Cat.No. HS-477 008; Recombinant rabbit antibody, 50 µg recombinant IgG (lyophilized)

Data Sheet

Reconstitution/ Storage	50 µg purified recombinant IgG, lyophilized. 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**: 1 : 1000 (AP staining) **IP**: not tested yet **ICC**: not tested yet **IHC**: 1 : 500 up to 1 : 2000 **IHC-P**: 1 : 1000 up to 1 : 2000
Clone	Rb17F7
Subtype	IgG1 (κ light chain)
Immunogen	Synthetic peptide corresponding to residues near the amino terminus of mouse Galectin-3 (UniProt Id: P16110)
Reactivity	Reacts with: mouse (P16110). No signal: human (P17931), rat. Other species not tested yet.
Remarks	This antibody is a chimeric antibody based on the monoclonal rat antibody SY-17F7. The constant regions of the heavy and light chains have been replaced by rabbit specific sequences. The antibody can therefore be used with standard anti-rabbit secondary reagents. The antibody has been expressed in mammalian cells.

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

Background

Galectin-3 (Gal-3, Mac-2) is a β-galactoside binding protein that is predominantly located in the cytoplasm and shuttles into the nucleus. In addition, it is secreted to the cell surface and into biological fluids. Depending on its localization, it exerts pleiotropic biological functions like cell growth, cell differentiation, inflammation, fibrogenesis, migration, apoptosis, and host defense (1). It is also involved in cancer pathogenesis, proliferation, and spreading of metastasis (2). Galectin-3 is highly expressed in the covering epithelia of the digestive tract and the urinary system (3) and plays important roles in the organization of renal and intestinal cells. Furthermore, Galectin-3 has been identified in a variety of other cell types including fibroblasts, keratinocytes, granulocytes, dendritic cells, and macrophages (2). Galectin-3 is expressed by certain tissue-resident macrophages such as Kupffer cells in the liver, red pulp macrophages in the spleen, and alveolar macrophages in the lung (3). In the brain, Galectin-3 is abundant in activated microglia but not expressed in resting cells. Following brain injury, Galectin-3 triggers anti-inflammatory properties of microglia (4). In Alzheimer's disease, Gal-3 expression is strictly associated with microglial cell activation around Aβ plaques. In stroke, Gal-3 was found to be expressed primarily in proinflammatory microglial cells (5).

Selected General References

Galectin-3 as a novel biomarker for disease diagnosis and a target for therapy (Review).
Dong R et al. Int J Mol Med (2018) PubMed:29207027

Galectin-3, a rising star in modulating microglia activation under conditions of neurodegeneration.
García-Revilla J et al. Cell Death Dis (2022) PubMed:35859075

Galectin-3: mediator of microglia responses in injured brain.
Rahimian R et al. Drug Discov Today (2018) PubMed:29133191

Expression and immunohistochemical localization of galectin-3 in various mouse tissues.
Kim H et al. Cell Biol Int (2007) PubMed:17222570

Galectin-3: an open-ended story.
Dumic J et al. Biochim Biophys Acta (2006) PubMed:16478649

Access the online factsheet including applicable protocols at https://sysy-histosure.com/product/HS-477008 or scan the QR-code.

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 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 freeze-thaw cycles.
- Please refer to our **tips and hints for subsequent storage** of reconstituted antibodies and control peptides and proteins.