SYSY | HistoSure

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

Lyve1 (Cytosol)

Cat.No. HS-536 014; Polyclonal Guinea pig antibody, 100 µl antiserum (lyophilized)

Data Sheet

Reconstitution/ Storage	100 µl antiserum, lyophilized. For **reconstitution** add 100 µl H_2O, then aliquot and store at -20°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 : 500 (AP-staining) **IP**: not tested yet **ICC**: not tested yet **IHC**: 1 : 500 (see remarks) **IHC-P (FFPE)**: 1 : 150 (see remarks)
Immunogen	Synthetic peptide corresponding to residues near the carboxy terminus of mouse Lyve1 (UniProt Id: Q8BHC0)
Reactivity	Reacts with: mouse (Q8BHC0), rat (D3ZD19). No signal: human (Q9Y5Y7). Other species not tested yet.
Remarks	**IHC**: Antigen retrieval with citrate buffer pH 6 can be applied to improve the signal to noise ratio. **IHC-P (FFPE)**: For chromogenic detection, an optimized AGR time of 30 minutes is recommended for best results. For fluorescent detection, an optimized AGR time of overnight minutes is recommended for best results.

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

Background

Lymphatic vessel endothelial hyaluronan receptor-1 (Lyve1) is a type I integral membrane glycoprotein and a member of the Link protein superfamily (1). It is predominantly expressed on lymphatic endothelial cells, where it functions as a key marker for identifying lymphatic vasculature and mediates binding and internalization of hyaluronan (HA) (2). Beyond the lymphatic system, Lyve1 is also detected in liver sinusoidal endothelial cells (3) and in subsets of tissue macrophages, including perivascular and interstitial macrophages in the lung, aorta, and mammary gland (4,5). Functionally, Lyve1 regulates HA metabolism, extracellular matrix remodeling, and leukocyte trafficking (2,4). Clinically, altered Lyve1 expression is implicated in several pathologies, as it correlates with lymphangiogenesis and metastatic spread in cancer (3,6), contributes to the regulation of vascular homeostasis and arterial stiffness (5), and participates in inflammatory and fibrotic conditions, such as rheumatoid arthritis and psoriasis (7).

Selected General References

Hyaluronan-binding proteins: tying up the giant.
Day AJ et al. J Biol Chem (2002) PubMed:11717315

LYVE-1-expressing Macrophages Modulate the Hyaluronan-containing Extracellular Matrix in the Mammary Stroma and Contribute to Mammary Tumor Growth.
Elfstrum AK et al. Cancer Res Commun (2024) PubMed:38717149

Hyaluronan Receptor LYVE-1-Expressing Macrophages Maintain Arterial Tone through Hyaluronan-Mediated Regulation of Smooth Muscle Cell Collagen.
Lim HY et al. Immunity (2018) PubMed:30054204

The shedded ectodomain of Lyve-1 expressed on M2-like tumor-associated macrophages inhibits melanoma cell proliferation.
Dollt C et al. Oncotarget (2017) PubMed:29262593

Molecular control of lymphatic metastasis.
Achen MG et al. Ann N Y Acad Sci (2008) PubMed:18519975

The lymphatics revisited: new perspectives from the hyaluronan receptor LYVE-1.
Jackson DG et al. Trends Cardiovasc Med (2003) PubMed:12554094

LYVE-1 is not restricted to the lymph vessels: expression in normal liver blood sinusoids and down-regulation in human liver cancer and cirrhosis.
Mouta Carreira C et al. Cancer Res (2001) PubMed:11719431

Access the online factsheet including applicable protocols at https://sysy-histosure.com/product/HS-536014 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.