SYSY Antibodies

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LAMP3

Cat.No. 391 005; Polyclonal Guinea pig antibody, 50 µg specific antibody (lyophilized)

Data Sheet

Reconstitution/ Storage	50 µg specific antibody, lyophilized. Affinity purified with the immunogen. 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**: not tested yet **IP**: not tested yet **ICC**: not tested yet **IHC**: 1 : 500 **IHC-P**: 1 : 200 up to 1 : 5000
Immunogen	Synthetic peptide corresponding to C-terminal residues of mouse LAMP3. (UniProt Id: Q7TST5)
Reactivity	Reacts with: mouse (Q7TST5), rat (Q5XI99). No signal: human (Q9UQV4). Other species not tested yet.
Specificity	Recognizes LAMP 3, no crossreactivity to LAMP 1, LAMP 2 and LAMP 5. K.O. validated

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

Background

LAMP 3 (**l**ysosome-**a**ssociated **m**embrane glyco**p**rotein **3**), also referred to as **DC-LAMP** (dendritic cell LAMP) or **CD 208**, is a member of the LAMP protein family and a single-pass type I transmembrane protein that can be variably glycosylated. It is specifically expressed in lung type II pneumocytes and by activated human dendritic cells (1, 2).
Recent studies demonstrated high expression of LAMP 3 in a variety of malignancies including squamous cell carcinoma, gastrointestinal cancer, breast cancer, ovarian cancer, and cervical cancer. Its expression has been associated with metastasis and poor overall survival (3, 4, 5).

Selected References for 391 005

PRDM3/16 Regulate Chromatin Accessibility Required for NKX2-1 Mediated Alveolar Epithelial Differentiation and Function.
He H, Bell SM, Davis AK, Zhao S, Sridharan A, Na CL, Guo M, Xu Y, Snowball J, Swarr DT, Zacharias WJ, et al.
bioRxiv : the preprint server for biology (2023) : . . **IHC-P; tested species: mouse**

Multi-lineage Lung Regeneration by Stem Cell Transplantation across Major Genetic Barriers.
Hillel-Karniel C, Rosen C, Milman-Krentsis I, Orgad R, Bachar-Lustig E, Shezen E, Reisner Y
Cell reports (2020) 303: 807-819.e4. . **IHC; tested species: mouse**

Emergence of inflammatory fibroblasts with aging in Hermansky-Pudlak syndrome associated pulmonary fibrosis.
Banaschewski BJH, Michki SN, Sitaraman S, Pan R, Wang JY, Stewart D, Goldy MK, Lin SM, Cantu E, Katzen JB, Basil MC, et al.
Communications biology (2025) 81: 284. . **IHC; tested species: mouse**

Stem cell migration drives lung repair in living mice.
Chioccioli M, Liu S, Magruder S, Tata A, Borriello L, McDonough JE, Konkimalla A, Kim SH, Nouws J, Gonzalez DG, Traub B, et al.
Developmental cell (2024) : . . **IHC; tested species: mouse**

Dysregulated alveolar epithelial cell progenitor function and identity in Hermansky-Pudlak syndrome.
Wang JY, Michki SN, Sitaraman S, Banaschewski BJ, Jamal R, Gokey JJ, Lin SM, Katzen JB, Basil MC, Cantu E, Kropski JA, et al.
JCI insight (2024) 103: . . **IHC; tested species: mouse**

Efficient Adeno-associated Virus-mediated Transgenesis in Alveolar Stem Cells and Associated Niches.
Konkimalla A, Elmore Z, Konishi S, Macadlo L, Katsura H, Tata A, Asokan A, Tata PR
American journal of respiratory cell and molecular biology (2023) 693: 255-265. . **IHC; tested species: mouse**

Transitional cell states sculpt tissue topology during lung regeneration.
Konkimalla A, Konishi S, Macadlo L, Kobayashi Y, Farino ZJ, Miyashita N, El Haddad L, Morowitz J, Barkauskas CE, Agarwal P, Souma T, et al.
Cell stem cell (2023) 3011: 1486-1502.e9. . **IHC; tested species: mouse**

Multi-apical polarity of alveolar stem cells and their dynamics during lung development and regeneration.
Konkimalla A, Konishi S, Kobayashi Y, Kadur Lakshminarasimha Murthy P, Macadlo L, Mukherjee A, Elmore Z, Kim SJ, Pendergast AM, Lee PJ, Asokan A, et al.
iScience (2022) 2510: 105114. . **IHC; tested species: mouse**

Three-axis classification of mouse lung mesenchymal cells reveals two populations of myofibroblasts.
Narvaez Del Pilar O, Gacha Garay MJ, Chen J
Development (Cambridge, England) (2022) 1496: . . **IHC; tested species: mouse**

Differential chromatin binding of the lung lineage transcription factor NKX2-1 resolves opposing murine alveolar cell fates in vivo.
Little DR, Lynch AM, Yan Y, Akiyama H, Kimura S, Chen J
Nature communications (2021) 121: 2509. . **IHC; tested species: mouse**

Selected General References

A novel lysosome-associated membrane glycoprotein, DC-LAMP, induced upon DC maturation, is transiently expressed in MHC class II compartment.
de Saint-Vis B et al. Immunity (1998) PubMed:9768752

Access the online factsheet including applicable protocols at https://sysy.com/product/391005 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.