SYSY | HistoSure

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Cytokeratin7 human specific

Cat.No. HS-454 008; Recombinant rabbit antibody, 100 µl recombinant IgG (lyophilized)

Data Sheet

Reconstitution/ Storage	100 µl purified recombinant IgG, lyophilized. Albumin and azide were added for stabilization. For **reconstitution** add 100 µl H_2O. 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.
Concentration	1 mg/ml
Applications	**WB**: 1 : 1000 (AP-staining) **IP**: not tested yet **ICC**: 1 : 1000 **IHC**: not tested yet **IHC-P**: 1 : 200 up to 1 : 1000
Clone	Rb123E11
Subtype	IgG1 (κ light chain)
Immunogen	Synthetic peptide corresponding to residues surrounding AA 450 of human CK7 (UniProt Id: P08729)
Reactivity	Reacts with: human (P08729). No signal: mouse (Q9DCV7). Other species not tested yet.
Remarks	This antibody is a chimeric antibody based on the monoclonal rat antibody clone 123E11H11. The constant regions of the heavy and light chains have been replaced by rabbit specific sequences. Therefore, the antibody can 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

Cytokeratins are cytoskeleton proteins of epithelial tissues, contributing to the mechanical stabilization of the cells. The cytokeratin family consists of at least 20 isotypes, which are largely specific for particular organs or tissue types. Therefore, immunohistochemical staining of cytokeratins is clinically used for diagnosis of carcinomas, in particular of unclear metastases and in precise classification and subtyping of tumors (1). Cytokeratin 7 (CK7) is expressed in healthy bladder, in the female genital tract epithelium, in mesothelium and in the lung (2). In tumors, CK7 expression is found in the majority of carcinoma types, with the exception of those carcinomas arising from the colon, prostate, kidney and thymus (3). Furthermore, CK7 expression can have prognostic relevance, e.g. adverse prognostic factor in lung cancer (4), or predictive relevance, e.g. predictive factor of response to concurrent radiochemotherapy in advanced cervical cancer (5).

Selected General References

The human keratins: biology and pathology.
Moll R et al. Histochem Cell Biol (2008) PubMed:18461349

Identification of relevant prognostic values of cytokeratin 20 and cytokeratin 7 expressions in lung cancer.
Luo HT et al. Biosci Rep (2017) PubMed:28827446

Cytokeratin 7 as a predictive factor for response to concommitant radiochemotherapy for locally advanced cervical cancer: a preliminary study.
Lambaudie E et al. Anticancer Res (2014) PubMed:24403459

Cytokeratin 7 and cytokeratin 20 expression in epithelial neoplasms: a survey of 435 cases.
Chu P et al. Mod Pathol (2000) PubMed:11007036

Congenital diaphragmatic hernia treated by perinatal stabilization.
Iwanaka T et al. Asia Oceania J Obstet Gynaecol (1994) PubMed:8092953

Access the online factsheet including applicable protocols at https://sysy-histosure.com/product/HS-454008 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.