SYSY Antibodies

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Vimentin

Cat.No. 172 002; Polyclonal rabbit antibody, 200 µl antiserum (lyophilized)

Data Sheet

Reconstitution/ Storage	200 µl antiserum, lyophilized. For **reconstitution** add 200 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 : 1000 (ECL detection) **IP**: not tested yet **ICC**: 1 : 500 **IHC**: 1 : 200 up to 1 : 500 **IHC-P (FFPE)**: 1 : 500 **EM**: external data (see remarks)
Immunogen	Recombinant protein corresponding to AA 1 to 466 from mouse Vimentin (UniProt Id: P20152)
Reactivity	Reacts with: human (P08670), rat (P31000), mouse (P20152), monkey. No signal: zebrafish. Other species not tested yet.
Specificity	K.O. validated PubMed: 27419376
Remarks	**EM**: This antibody has been successfully applied and published for this method by customers (see application-specific references).

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

Background

Vimentin belongs to the family of intermediate filaments that can be subdivided into six major groups based on sequence similarity. Vimentin belongs to the type III category and is the predominant subunit protein of intermediate filaments in tissues of mesenchymal origin.
Like other intermediate filaments it plays a role in the cytoskeletal organization and maintenance of cell shape and morphology.

Selected References for 172 002

Release of astroglial vimentin by extracellular vesicles: Modulation of binding and internalization of C3 transferase in astrocytes and neurons.
Adolf A, Rohrbeck A, Münster-Wandowski A, Johansson M, Kuhn HG, Kopp MA, Brommer B, Schwab JM, Just I, Ahnert-Hilger G, Höltje M, et al.
Glia (2018) : . . **WB, ICC, IHC, EM; KO verified**

The intermediate filament protein vimentin is essential for axonotrophic effects of Clostridium botulinum C3 exoenzyme.
Adolf A, Leondaritis G, Rohrbeck A, Eickholt BJ, Just I, Ahnert-Hilger G, Höltje M
Journal of neurochemistry (2016) 1392: 234-244. . **IHC, WB; KO verified**

Involvement of cancer-derived EMT cells in the accumulation of 18F-fluorodeoxyglucose in the hypoxic cancer microenvironment.
Sugita S, Yamato M, Hatabu T, Kataoka Y
Scientific reports (2021) 111: 9668. . **IHC; tested species: mouse**

The Higher Sensitivity of GABAergic Compared to Glutamatergic Neurons to Growth-Promoting C3bot Treatment Is Mediated by Vimentin.
Adolf A, Turko P, Rohrbeck A, Just I, Vida I, Ahnert-Hilger G, Höltje M
Frontiers in cellular neuroscience (2020) 14: 596072. . **WB; tested species: rat**

A Simple DMSO-Based Method for Cryopreservation of Primary Hippocampal and Cortical Neurons.
Ishizuka Y, Bramham CR
Journal of neuroscience methods (2019) : 108578. . **WB; tested species: rat**

Tanycytes and a differential fatty acid metabolism in the hypothalamus.
Hofmann K, Lamberz C, Piotrowitz K, Offermann N, But D, Scheller A, Al-Amoudi A, Kuerschner L
Glia (2017) 652: 231-249. . **IHC; tested species: mouse**

A novel method for culturing stellate astrocytes reveals spatially distinct Ca2+ signaling and vesicle recycling in astrocytic processes.
Wolfes AC, Ahmed S, Awasthi A, Stahlberg MA, Rajput A, Magruder DS, Bonn S, Dean C
The Journal of general physiology (2017) 1491: 149-170. . **WB**

KCa3.1 channels modulate the processing of noxious chemical stimuli in mice.
Lu R, Flauaus C, Kennel L, Petersen J, Drees O, Kallenborn-Gerhardt W, Ruth P, Lukowski R, Schmidtko A
Neuropharmacology (2017) 125: 386-395. . **IHC; tested species: mouse**

NDRG2 as a marker protein for brain astrocytes.
Flügge G, Araya-Callis C, Garea-Rodriguez E, Stadelmann-Nessler C, Fuchs E
Cell and tissue research (2014) 3571: 31-41. . **IHC; tested species: marmoset**

Age-related brain pathology in Octodon degu: blood vessel, white matter and Alzheimer-like pathology.
van Groen T, Kadish I, Popović N, Popović M, Caballero-Bleda M, Baño-Otálora B, Vivanco P, Rol MÁ, Madrid JA
Neurobiology of aging (2011) 329: 1651-61. . **IHC**

Activity-dependent regulation of MHC class I expression in the developing primary visual cortex of the common marmoset monkey.
Ribic A, Flügge G, Schlumbohm C, Mätz-Rensing K, Walter L, Fuchs E
Behavioral and brain functions : BBF (2011) 7: 1. . **IHC**

Access the online factsheet including applicable protocols at https://sysy.com/product/172002 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.