SYSY Antibodies

Rudolf-Wissell-Str. 28a
37079 Göttingen, Germany
Phone: +49 551-50556-0
Fax: +49 551-50556-384
E-mail: sales@sysy.com
Web: www.sysy.com

Vimentin

Cat.No. 172 004; 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 : 1000 (AP staining) **IP**: not tested yet **ICC**: 1 : 500 **IHC**: 1 : 500 **IHC-P (FFPE)**: 1 : 250 up to 1 : 1000 **IHC-Fr**: 1 : 500 (see remarks) **ExM**: external data (see remarks)
Immunogen	Recombinant protein corresponding to AA 1 to 466 from mouse Vimentin (UniProt Id: P20152)
Reactivity	Reacts with: mouse (P20152), rat (P31000), human (P08670). Other species not tested yet.
Remarks	**IHC-Fr**: The following fixatives are possible: acetone, 4% formaldehyde/PFA. **ExM**: 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 172 004

Oxygen-free metabolism in the bird inner retina supported by the pecten.
Damsgaard C, Skøtt MV, Williams CJA, Malte H, Kidmose CK, Busk M, Dedek K, Konradsen AH, Rasmussen ASS, Thomsen JS, Mikkelsen AVGT, et al.
Nature (2026) : . . **IHC**

Light-microscopy-based connectomic reconstruction of mammalian brain tissue.
Tavakoli MR, Lyudchik J, Januszewski M, Vistunou V, Agudelo Dueñas N, Vorlaufer J, Sommer C, Kreuzinger C, Oliveira B, Cenameri A, Novarino G, et al.
Nature (2025) 6428067: 398-410. . **EXM; tested species: mouse**

Selected General References

Architecture of the vimentin cytoskeleton is modified by perturbation of the GTPase ARF1.
Styers ML et al. J. Cell. Sci. (2006) PubMed:16912072

A direct interaction between actin and vimentin filaments mediated by the tail domain of vimentin.
Esue O et al. J. Biol. Chem. (2006) PubMed:16901892

Ultrastructure of intermediate filaments of nestin- and vimentin-immunoreactive astrocytes in organotypic slice cultures of hippocampus.
Miyaguchi K et al. J. Struct. Biol. (1997) PubMed:9356292

The cytoskeleton of primary astrocytes in culture contains actin, glial fibrillary acidic protein, and the fibroblast-type filament protein, vimentin.
Chiu FC et al. J. Neurochem. (1981) PubMed:7019391

Vimentin: a phosphoprotein under hormonal regulation.
Browning ET et al. J. Cell Biol. (1981) PubMed:7026579

The synthesis and distribution of desmin and vimentin during myogenesis in vitro.
Gard DL et al. Cell (1980) PubMed:7188890

Access the online factsheet including applicable protocols at https://sysy.com/product/172004 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.