

Bovine Profilin

Cat.No. 308 011; Monoclonal mouse antibody, 100 µg purified IgG (lyophilized)

Data Sheet

Reconstitution/ Storage	100 µg purified IgG, lyophilized. For reconstitution add 100 µl H ₂ O 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: 1 : 500 up to 1 : 5000 (AP staining) IP: not tested yet ICC: yes IHC: yes IHC-P: 1 : 1000
Clone	2H11
Subtype	IgG1 (λ light chain)
Immunogen	Recombinant protein corresponding to AA 1 to 140 from bovine Profilin1 (UniProt Id: P02584)
Reactivity	Reacts with: human (P07737), cow, rabbit, Guinea pig, opossum. No signal: mouse (P62962). Other species not tested yet.

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

Background

Profilins are small proteins (14-17 kDa) which are involved in the regulation of the cellular microfilament system. They are associated with highly dynamic microfilament structures present at cellular membranes. Profilins have been found together with lamellipodia, focal adhesions, surface ruffles and on intracellular vesicles and have been shown to interact with different cytoskeleton proteins like actin, gephyrin and the Arp 2/3 complex. Recently a tumor suppression activity has been described for profilin.

Selected References for 308 011

- Suppression of tumorigenicity in breast cancer cells by the microfilament protein profilin 1. Janke J, Schlüter K, Jandrig B, Theile M, Köble K, Arnold W, Grinstein E, Schwartz A, Estevéz-Schwarz L, Schlag PM, Jockusch BM, et al. *The Journal of experimental medicine* (2000) 19110: 1675-86. . **WB, ICC**
- Effects of single amino acid substitutions in the actin-binding site on the biological activity of bovine profilin I. Schlüter K, Schleicher M, Jockusch BM *Journal of cell science* (1998) 111 (Pt 22): 3261-73. . **WB, ICC**
- Proteomic comparison of nasopharyngeal cancer cell lines C666-1 and NP69 identifies down-regulation of annexin II and beta2-tubulin for nasopharyngeal carcinoma. Chan CM, Wong SC, Lam MY, Hui EP, Chan JK, Lo ES, Cheuk W, Wong MC, Tsao SW, Chan AT *Archives of pathology & laboratory medicine* (2008) 1324: 675-83. . **IHC-P; tested species: human**
- Complex formation between the postsynaptic scaffolding protein gephyrin, profilin, and Mena: a possible link to the microfilament system. Giesemann T, Schwarz G, Nawrotzki R, Berhörster K, Rothkegel M, Schlüter K, Schrader N, Schindelin H, Mendel RR, Kirsch J, Jockusch BM, et al. *The Journal of neuroscience : the official journal of the Society for Neuroscience* (2003) 2323: 8330-9. . **IHC**
- Actin filaments at the leading edge of cancer cells are characterized by a high mobile fraction and turnover regulation by profilin I. Lorente G, Syriani E, Morales M *PloS one* (2014) 91: e85817. . **ICC**
- Functional characterization of green fluorescent protein-profilin fusion proteins. Wittenmayer N, Rothkegel M, Jockusch BM, Schlüter K *European journal of biochemistry* (2000) 26716: 5247-56. . **WB**
- A role for polyproline motifs in the spinal muscular atrophy protein SMN. Profilins bind to and colocalize with smn in nuclear gems. Giesemann T, Rathke-Hartlieb S, Rothkegel M, Bartsch JW, Buchmeier S, Jockusch BM, Jockusch H *The Journal of biological chemistry* (1999) 27453: 37908-14. . **ICC**

Selected General References

- The actin-binding protein profilin I is localized at synaptic sites in an activity-regulated manner. Neuhoff H et al. *Eur. J. Neurosci.* (2005) PubMed:15654839
- Tumor suppressor activity of profilin requires a functional actin binding site. Wittenmayer N et al. *Mol. Biol. Cell* (2004) PubMed:14767055

Access the online factsheet including applicable protocols at <https://sysy.com/product/308011> 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.