Synaptic Systems

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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_2O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C until use.
Applications	**WB**: 1 : 500 up to 1 : 5000 (AP staining) **IP**: not tested yet **ICC**: yes **IHC**: yes **IHC-P/FFPE**: 1 : 1000
Clone	2H11
Subtype	IgG1 (λ 1 light chain)
Immunogen	Recombinant protein corresponding to AA 1 to 140 from bovine Profilin1 (UniProt Id: P02584)
Epitop	Epitop: 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.
Specificity	Specific for profilin 1.

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

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 SYSY Antibodies

Suppression of tumorigenicity in breast cancer cells by the microfilament protein profilin 1.
Janke J, Schlüter K, Jandrig B, Theile M, Kölble K, Arnold W, Grinstein E, Schwartz A, Estevéz-Schwarz L, Schlag PM, Jockusch BM, et al.
The Journal of experimental medicine (2000) 191(10): 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) 132(4): 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) 23(23): 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) 9(1): e85817. **ICC**

Functional characterization of green fluorescent protein-profilin fusion proteins.
Wittenmayer N, Rothkegel M, Jockusch BM, Schlüter K
European journal of biochemistry (2000) 267(16): 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) 274(53): 37908-14. **ICC**

Selected General References

The actin-binding protein profilin I is localized at synaptic sites in an activity-regulated manner.
Neuhoff H, Sassoè-Pognetto M, Panzanelli P, Maas C, Witke W, Kneussel M
The European journal of neuroscience (2005) 21(1): 15-25.

Tumor suppressor activity of profilin requires a functional actin binding site.
Wittenmayer N, Jandrig B, Rothkegel M, Schlüter K, Arnold W, Haensch W, Scherneck S, Jockusch BM
Molecular biology of the cell (2004) 15(4): 1600-8.