10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-Profilin (C-terminal region) Antibody

Catalog # AN1922

Product Information

Application	WB, ICC
Primary Accession	P07737
Host	Rabbit
Clonality	Rabbit Polyclonal
Isotype	IgG
Calculated MW	15054

Additional Information

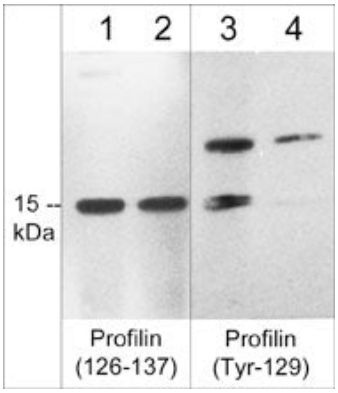
Gene ID	5216
Other Names	Epididymis Li184a Profilin PFN1 PFN2
Dilution	WB~~1:1000 ICC~~N/A
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Anti-Profilin (C-terminal region) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.
Shipping	Blue Ice

Background

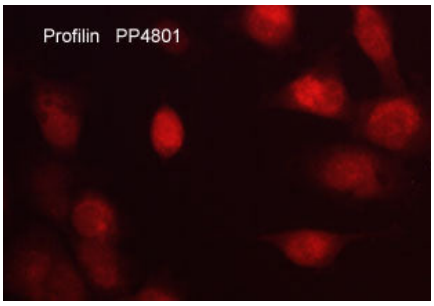
Profilins are small actin-binding proteins that have functions in cell motility, cytokinesis, gene transcription, endocytosis and neuronal plasticity. Four profilin isoforms have been identified in mammals. Profilin-1 (PFN1) and profilin-2a (PFN2a) isoforms are highly conserved in structure, but PFN1 is ubiquitously expressed while PFN2a is preferentially enriched in brain. In addition, there are two testis-specific profilins, PFN3 and PFN4, that significantly differ in primary sequence and function compared to PFN1 and PFN2a. Profilin is phosphorylated at both tyrosine and serine residues in vivo. Tyr-129 is phosphorylated in response to VEGF-A stimulation, and this promotes profilin actin binding and polymerization. Tyr-129 phosphorylation may be important for angiogenesis induced by injuries. Ser-138 is phosphorylated by ROCK and dephosphorylated by PP1. This serine phosphorylation inhibits G-actin binding, as well as decreases profilin's aggregation suppressor activity by inhibiting binding to huntingtin. Thus, Tyr-129 phosphorylation may activate while Ser-138 phosphorylation may inhibit profilin activity.

Images

Western blot of HUVEC stimulated with Pervanadate (1 mM) for 30 min (lanes 1-4). The blots were treated with alkaline phosphatase to remove phosphorylation (lanes 2 & 4), then probed with anti-Profilin (a.a. 126-137) (lanes 1



& 2) or anti-Profilin (Tyr-129) phospho-specific (lanes 3 & 4). The antibodies detect profilin at 15 kDa. In lanes 3 & 4, the antibody also detects an unknown 20 kDa protein.



Immunocytochemical labeling of Profilin in aldehyde-fixed and NP-40 permeabilized human NCI-H1915 lung carcinoma cells. The cells were labeled with rabbit polyclonal anti-Profilin (AN1922) antibody. The antibody was detected using appropriate secondary antibody conjugated to DyLight® 594.