

# Anti-Profilin (Ser-138), Phosphospecific Antibody

Catalog # AN1921

## Product Information

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<b>Application</b>	WB
<b>Primary Accession</b>	<a href="#">P07737</a>
<b>Host</b>	Rabbit
<b>Clonality</b>	Rabbit Polyclonal
<b>Isotype</b>	IgG
<b>Calculated MW</b>	15054

## Additional Information

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<b>Gene ID</b>	5216
<b>Other Names</b>	Epididymis Li184a Profilin PFN1 PFN2
<b>Dilution</b>	WB~~1:1000
<b>Storage</b>	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.
<b>Precautions</b>	Anti-Profilin (Ser-138), Phosphospecific Antibody is for research use only and not for use in diagnostic or therapeutic procedures.
<b>Shipping</b>	Blue Ice

## Background

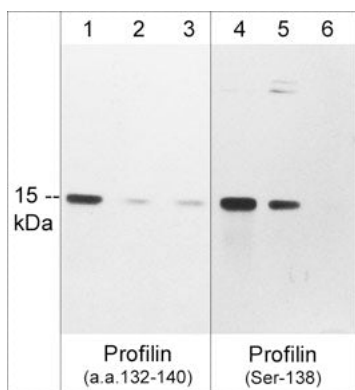
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Profilins are small actin-binding proteins that have functions in cell motility, cytokinesis, gene transcription, endocytosis and neuronal plasticity. Four profilin isoforms have been identified in mammals. Profilin-1 (PFN1) and profilin-2a (PFN2a) 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.

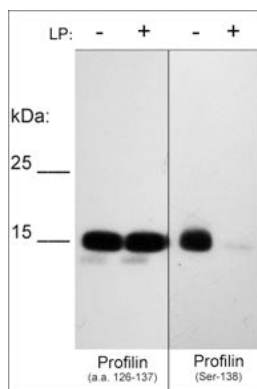
## Images

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Western blot of Jurkat stimulated with calyculin A (100 nM) for 30 min (lanes 1-6). The blots were probed with anti-Profilin (a.a. 132-140) (lanes 1-3) or anti-Profilin (Ser-138) phospho-specific (lanes 4-6). Both antibodies



were used in the absence (lanes 1 & 4) or presence of unphosphorylated Profilin (Ser-138; PX4825) (lanes 2 & 5) or phospho-Profilin (Ser-138; PX4795) (lanes 3 & 6) blocking peptides.



Western blot of human recombinant Profilin-1 phosphorylated in vitro with PKC $\alpha$  kinase then untreated (-) or treated with lambda phosphatase (+). The blots were probed with anti-Profilin (a.a. 126-137) (left panel) or anti-Profilin (Ser-138) phospho-specific (right panel) antibodies at 1:1000.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.