

Anti-Cofilin 1 (Ser-3), Phosphospecific Antibody
Catalog # AN1719**Specification****Anti-Cofilin 1 (Ser-3), Phosphospecific Antibody - Product Information**

Application	WB
Primary Accession	P23528
Reactivity	Bovine, Chicken
Host	Rabbit
Clonality	Rabbit Polyclonal
Isotype	IgG
Calculated MW	18502

Anti-Cofilin 1 (Ser-3), Phosphospecific Antibody - Additional Information

Gene ID	1072
Other Names	
ADF, p18	

Target/Specificity

Members of the ADF/cofilin (AC) family are actin-severing proteins that regulate actin remodeling during cellular events such as cell migration, cytokinesis, phagocytosis, endocytosis, axon development, and immune cell activation. In mammals, there are three members of the AC family, muscle-specific cofilin (cofilin 2), non-muscle cofilin (cofilin 1), and ADF. In humans, cofilin 1 and ADF have 72% identity, with the major amino acid differences found in the C-terminal region. Regulation of cofilin activity can occur through serine phosphorylation. Activation of cofilin kinases, LIMK1 or LIMK2, leads to phosphorylation of cofilin at serine 3. This phosphorylation disrupts cofilin binding to actin in vitro and in vivo. Multiple phosphatases, PP1, PP2A, PP2B, slingshot, and chronophin can dephosphorylate Ser-3 and activate actin binding. Thus, Ser-3 phosphorylation is a major site for the regulation of cofilin activity.

Dilution

WB~~1:1000

Format

Antigen Affinity Purified

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-Cofilin 1 (Ser-3), Phosphospecific Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Shipping

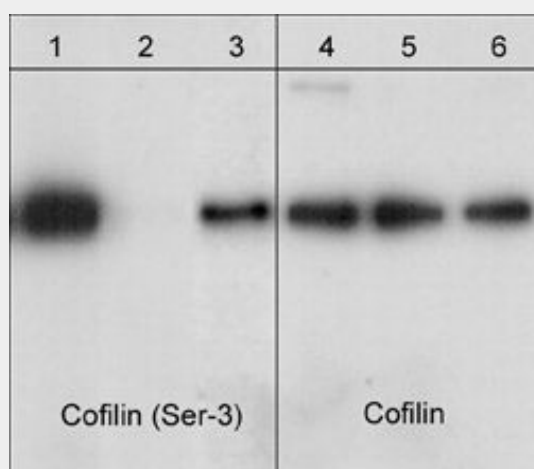
Blue Ice

Anti-Cofilin 1 (Ser-3), Phosphospecific Antibody - Protocols

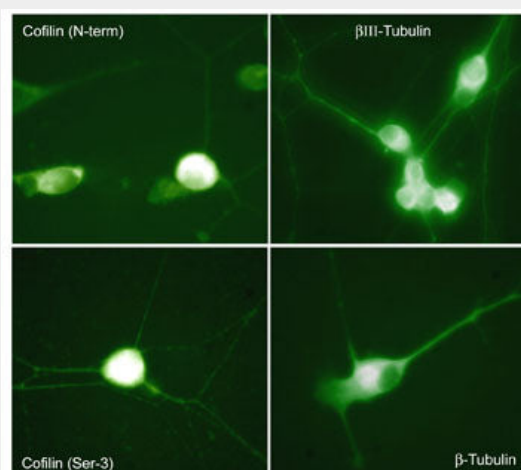
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Anti-Cofilin 1 (Ser-3), Phosphospecific Antibody - Images



Western blot of cofilin in jurkat cells. The blots were untreated (lanes 1 & 4) or treated (lanes 2, 3, 5 & 6) with lambda phosphatase. In lanes 3 & 6, the phosphatase was inhibited with phospho-Cofilin 1 (Ser-3) peptide. The blots were probed with anti-Cofilin 1 (Ser-3) phospho-specific (lanes 1-3) or anti-Cofilin 1 (N-terminus) (lanes 4-6).



Immunocytochemical labeling in chick dorsal root ganglion neurons using anti-Cofilin (N-terminus; CP1131), anti-Cofilin (Ser-3; CP1151), anti-βIII-Tubulin (C-terminus; TP1691) and anti-β-Tubulin (TM1541) antibodies. (Images provided by Dr. Diane Snow, Department of Anatomy & Neurobiology, University of Kentucky).

Anti-Cofilin 1 (Ser-3), Phosphospecific Antibody - Background

Members of the ADF/cofilin (AC) family are actin-severing proteins that regulate actin remodeling during cellular events such as cell migration, cytokinesis, phagocytosis, endocytosis, axon development, and immune cell activation. In mammals, there are three members of the AC family, muscle-specific cofilin (cofilin 2), non-muscle cofilin (cofilin 1), and ADF. In humans, cofilin 1 and ADF have 72% identity, with the major amino acid differences found in the C-terminal region. Regulation of cofilin activity can occur through serine phosphorylation. Activation of cofilin kinases, LIMK1 or LIMK2, leads to phosphorylation of cofilin at serine 3. This phosphorylation disrupts cofilin binding to actin in vitro and in vivo. Multiple phosphatases, PP1, PP2A, PP2B, slingshot, and chronophin can dephosphorylate Ser-3 and activate actin binding. Thus, Ser-3 phosphorylation is a major site for the regulation of cofilin activity.