Cofilin 1 (Ser-3), phospho-specific

Cat. #	CP1151
Host	Rabbit Polyclonal
Size	100 µl

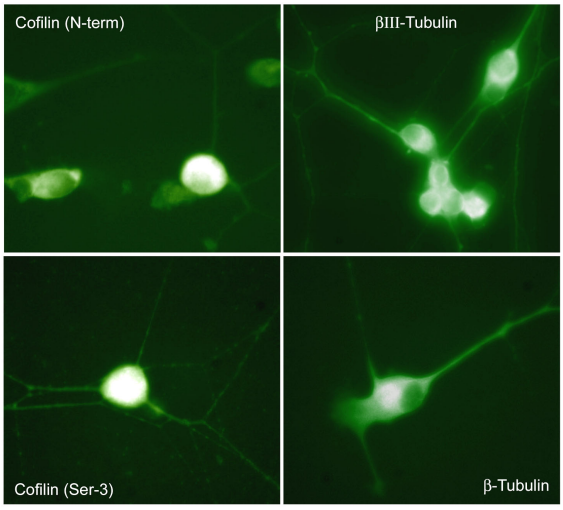
Background:

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.

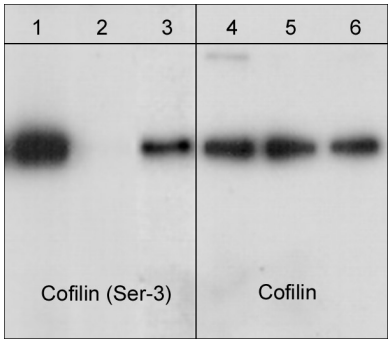
References

Bamburg, J.R. (1999). Annu Rev Cell Dev Biol. 15:185

Maciver, S.K. & Hussey, P.J. (2002). Genome Biol. 3(5): 3007



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).



Western blot of jurkat cells expressing cofilin 1. Blots were treated with (lanes 2, 3, 5, & 6) or without (lanes 1 & 4) lambda phosphatase for 1 hr at 37°C. In lanes 3 & 6, phosphatase treatments were performed in the presence of phospho-Cofilin 1 (Ser-3) peptide. Blots were probed with anti-Cofilin 1 (Ser-3) (lanes 1-3; CP1151) or anti-Cofilin 1 (lanes 4-6; CP1131). Phosphatase treatment removes Ser -3 phosphorylation of Cofilin, but this phosphatase activity is reduced in the presence of peptide.

www.ecmbiosciences.com
telephone: 859-879-2075
toll-free: 1-800-859-8202
tech: info@ecmbiosciences.com

ECM Biosciences

Rev 5/20/2008

Cofilin 1 (Ser-3), phospho-specific

Cat. #	CP1151
Host	Rabbit Polyclonal
Size	100 µl

Immunogen:

A synthetic phospho-peptide (coupled to KLH) corresponding to amino acid residues surrounding serine 3 in human Cofilin 1. This sequence has 100% homology with similar regions of rat and mouse Cofilin 1, and has two amino acid differences from human Cofilin 2.

Buffer and Storage:

Rabbit polyclonal, affinity-purified antibody is supplied in 100µl phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. Store at –20°C. Do not aliquot. Stable for 1 year.

Applications:

WB	1:1000
ELISA	1:2000
ICC	1:50

End user should determine optimal dilution for their particular applications and experiments.
Western blot membranes were incubated with diluted antibody in 5% non-fat milk, PBS, 0.04% Tween20 for 1hour at room temperature.

Specificity:

This antibody was cross-adsorbed to unphosphorylated Coflin 1 peptide then affinity purified using phospho-Cofilin 1 (Ser-3) peptide (without carrier). The antibody detects a 19 kDa* protein corresponding to the molecular mass of phosphorylated Cofilin 1 on SDS-PAGE immunoblots of Jurkat cells. This band can be removed by lambda phosphatase treatment.

*All molecular weights (MW) are confirmed by comparison to Bio-Rad Rainbow Markers and to western blot mobilities of known proteins with similar MW.

Related Products:

CP1131 Cofilin 1 (N-terminus) Rabbit Polyclonal
CX1155 phospho-Cofilin 1 (Ser-3) Peptide
LP1831 LIMK1 (C-terminus) Rabbit Polyclonal
LP2431 LIMK1 (Ser-323), phospho-specific [Conserved site] Rabbit
LP1891 LIMK1 (Thr-508), phospho-specific [Conserved site] Rabbit
SP1711 Slingshot-1L (C-terminal Region) Rabbit Polyclonal

www.ecmbiosciences.com
telephone: 859-879-2075
toll-free: 1-800-859-8202
tech: info@ecmbiosciences.com

ECM Biosciences

Rev 5/20/2008