

Cofilin 1 (H-12): sc-32158

BACKGROUND

Cofilin is ubiquitously expressed in eukaryotic cells where it binds to Actin, thereby regulating the rapid cycling of Actin assembly and disassembly essential for cellular viability. Cofilin is a low molecular weight protein that binds to filamentous F-Actin by bridging two longitudinally associated Actin subunits changing the F-Actin filament twist. This process is allowed by the dephosphorylation of Cofilin Ser 3 by factors such as opsonized zymosan. Lim kinase 1, a serine kinase, phosphorylates Cofilin and renders it unable to bind and depolymerise F-Actin.

REFERENCES

1. Moriyama, K., et al. 1996. Phosphorylation of Ser 3 of Cofilin regulates its essential function on Actin. *Genes Cells* 1: 73-86.
2. Yahara, I., et al. 1996. A role of Cofilin/destrin in reorganization of Actin cytoskeleton in response to stresses and cell stimuli. *Cell Struct. Funct.* 21: 421-424.
3. McGough, A., et al. 1997. Cofilin changes the twist of F-Actin: implications for actin filament dynamics and cellular function. *J. Cell Biol.* 138: 771-781.
4. Lappalainen, P., et al. 1997. Cofilin promotes rapid Actin filament turnover *in vivo*. *Nature* 388: 78-82.
5. Iida, K., et al. 1999. Cooperation of two Actin-binding proteins, Cofilin and Aip1, in *Saccharomyces cerevisiae*. *Genes Cells* 4: 21-32.
6. Nagaishi, K., et al. 1999. Participation of Cofilin in opsonized zymosan-triggered activation of neutrophil-like HL-60 cells through rapid desphosphorylation and translocation to plasma membranes. *J. Biochem.* 125: 891-898.
7. Stanyon, C.A., et al. 1999. LIM-kinase1. *Int. J. Biochem. Cell Biol.* 31: 389-394.

CHROMOSOMAL LOCATION

Genetic locus: CFL1 (human) mapping to 11q13.1; Cfl1 (mouse) mapping to 19 A.

SOURCE

Cofilin 1 (H-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Cofilin 1 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-32158 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

Cofilin 1 (H-12) is recommended for detection of Cofilin 1, non-muscle isoform of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with Cofilin 2, muscle isoform.

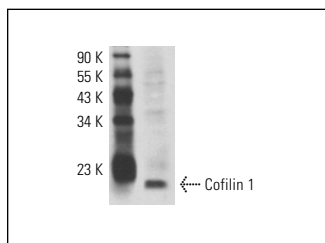
Cofilin 1 (H-12) is also recommended for detection of Cofilin 1, non-muscle isoform in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Cofilin 1 siRNA (h): sc-35078, Cofilin 1 siRNA (m): sc-35079, Cofilin 1 shRNA Plasmid (h): sc-35078-SH, Cofilin 1 shRNA Plasmid (m): sc-35079-SH, Cofilin 1 shRNA (h) Lentiviral Particles: sc-35078-V and Cofilin 1 shRNA (m) Lentiviral Particles: sc-35079-V.

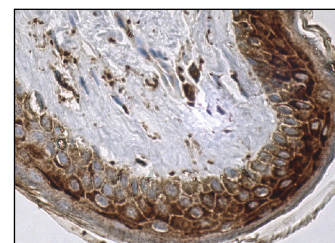
Molecular Weight of Cofilin 1: 19-21 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, K-562 whole cell lysate: sc-2203 or HeLa whole cell lysate: sc-2200.

DATA



Cofilin 1 (H-12): sc-32158. Western blot analysis of Cofilin 1 expression in Jurkat whole cell lysate.



Cofilin 1 (H-12): sc-32158. Immunoperoxidase staining of formalin fixed, paraffin-embedded human skin tissue showing cytoplasmic staining of epidermal cells.

SELECT PRODUCT CITATIONS

1. Rajesh, R.V., et al. 2010. Proteomic analysis of bovine omental, subcutaneous and intramuscular preadipocytes during *in vitro* adipogenic differentiation. *Comp. Biochem. Physiol. Part D Genomics Proteomics* 5: 234-244.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **Cofilin 1 (5): sc-53934**, our highly recommended monoclonal alternative to Cofilin 1 (H-12). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **Cofilin 1 (5): sc-53934**.