

Cofilin 2 (H-19): sc-32160

BACKGROUND

Cofilin 2, also known as CFL2 or Cofilin, muscle isoform, is a 166 amino acid protein that localizes to the cytoplasm and the cytoskeleton, as well as to the nuclear matrix, and contains one ADF-H domain. Existing as two alternatively spliced isoforms, one of which is known as CFL2a and is expressed in heart and skeletal muscle, and the other of which is known as CFL2b and is expressed ubiquitously, Cofilin 2 binds both F- and G-Actin and functions to control pH-dependent Actin polymerization and depolymerization. Cofilin 2 is subject to post-translational phosphorylation on Ser 24, an event which may prevent the nuclear localization of Cofilin 2. Defects in the gene encoding Cofilin 2 are the cause of nemaline myopathy type 7 (NEM7), a form of congenital myopathy that varies with age and is characterized by abnormal thread- or rod-like structures in muscle fibers.

REFERENCES

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2. Yahara, I., Aizawa, H., Moriyama, K., Iida, K., Yonezawa, N., Nishida, E., Hatanaka, H. and Inagaki, F. 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. Lappalainen, P. and Drubin, D.G. 1997. Cofilin promotes rapid Actin filament turnover *in vivo*. *Nature* 388:78-82.
4. McGough, A., Pope, B., Chiu, W. and Weeds, A. 1997. Cofilin changes the twist of F-Actin: implications for actin filament dynamics and cellular function. *J. Cell Biol.* 138: 771-781.
5. Nagaishi, K., Adachi, R., Kawanishi, T., Yamaguchi, T., Kasahara, T., Hayakawa, T. and Suzuki, K. 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.

CHROMOSOMAL LOCATION

Genetic locus: CFL2 (human) mapping to 14q13.1; Cfl2 (mouse) mapping to 12 C1.

SOURCE

Cofilin 2 (H-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Cofilin 2 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-32160 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 2 (H-19) is recommended for detection of Cofilin 2, 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 1, non-muscle isoform.

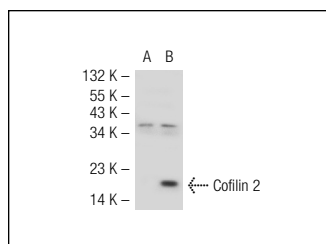
Cofilin 2 (H-19) is also recommended for detection of Cofilin 2, muscle isoform in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Cofilin 2 siRNA (h): sc-37027, Cofilin 2 siRNA (m): sc-37026, Cofilin 2 shRNA Plasmid (h): sc-37027-SH, Cofilin 2 shRNA Plasmid (m): sc-37026-SH, Cofilin 2 shRNA (h) Lentiviral Particles: sc-37027-V and Cofilin 2 shRNA (m) Lentiviral Particles: sc-37026-V.

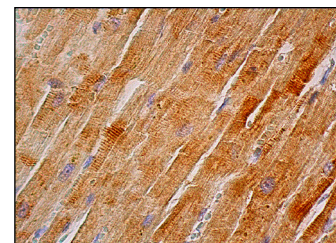
Molecular Weight of Cofilin 2: 21 kDa.

Positive Controls: Cofilin 2 (m): 293T Lysate: sc-119353 or Sol8 cell lysate: sc-2249.

DATA



Cofilin 2 (H-19): sc-32160. Western blot analysis of Cofilin 2 expression in non-transfected: sc-117752 (A) and mouse Cofilin 2 transfected: sc-119353 (B) 293T whole cell lysates.



Cofilin 2 (H-19): sc-32160. Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing cytoplasmic staining of myocytes.

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.

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Try **Cofilin 2 (D-5): sc-166958**, our highly recommended monoclonal alternative to Cofilin 2 (H-19).