

Cofilin 1 (h): 293T Lysate: sc-112308

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 like opsonized zymosan. LIM kinase 1 (LIMK-1), a serine kinase, phosphorylates Cofilin and renders it unable to bind and depolymerize F-Actin.

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. 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.
4. Lappalainen, P. and Drubin, D.G. 1997. Cofilin promotes rapid Actin filament turnover *in vivo*. *Nature* 388: 78-82.
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6. 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 dephosphorylation and translocation to plasma membranes. *J. Biochem.* 125: 891-898.
7. Stanyon, C.A. and Bernard, O. 1999. LIM kinase-1. *Int. J. Biochem. Cell Biol.* 31: 389-394.

CHROMOSOMAL LOCATION

Genetic locus: CFL1 (human) mapping to 11q13.1.

PRODUCT

Cofilin 1 (h): 293T Lysate represents a lysate of human Cofilin 1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

Cofilin 1 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive Cofilin 1 antibodies. Recommended use: 10-20 µl per lane.

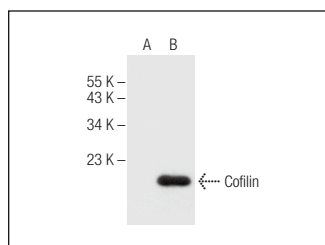
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Cofilin (E-8): sc-376476 is recommended as a positive control antibody for Western Blot analysis of enhanced human Cofilin 1 expression in Cofilin 1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

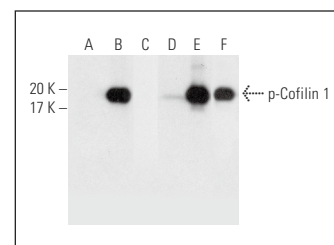
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



Cofilin (E-8): sc-376476. Western blot analysis of Cofilin 1 expression in non-transfected: sc-117752 (A) and human Cofilin 1 transfected: sc-112308 (B) 293T whole cell lysates.



Western blot analysis of Cofilin 1 phosphorylation in non-transfected: sc-117752 (A,D), untreated human Cofilin 1 transfected: sc-112308 (B,E) and lambda protein phosphatase (sc-200312A) treated human Cofilin 1 transfected: sc-112308 (C,F) 293T whole cell lysates. Antibodies tested include p-Cofilin 1 (F-11): sc-365882 (A,B,C) and Cofilin (FL-166): sc-33779 (D,E,F).

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

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.