

# Cofilin (FL-166): sc-33779

## 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.

## SOURCE

Cofilin (FL-166) is a rabbit polyclonal antibody raised against amino acids 1-166 representing full length Cofilin 1 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.

## RESEARCH USE

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

## APPLICATIONS

Cofilin (FL-166) is recommended for detection of Cofilin 1, Cofilin 2, and to a lesser extent, ADF 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).

Cofilin (FL-166) is also recommended for detection of Cofilin 1, Cofilin 2 and, to a lesser extent, ADF in additional species, including equine, canine, bovine and porcine.

Molecular Weight of Cofilin: 19-21 kDa.

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

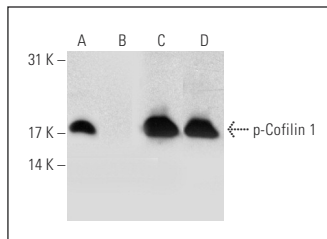
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

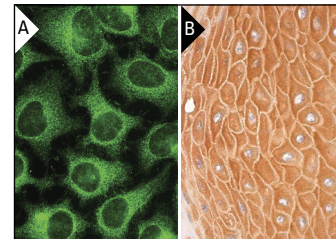
## STORAGE

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

## DATA



Western blot analysis of Cofilin 1 phosphorylation in untreated (A,C) and lambda protein phosphatase (sc-200312A) treated (B,D) K-562 whole cell lysates. Antibodies tested include p-Cofilin 1 (hSer 3)-R: sc-12912-R (A,B) and Cofilin (FL-166): sc-33779 (C,D).



Cofilin (FL-166): sc-33779. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human oral mucosa tissue showing cytoplasmic staining of squamous epithelial cells (B).

## SELECT PRODUCT CITATIONS

- Vergara, D., et al. 2011. Resveratrol inhibits the epidermal growth factor-induced epithelial mesenchymal transition in MCF-7 cells. *Cancer Lett.* 310: 1-8.
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- Borriello, A., et al. 2011. The tyrosine kinase inhibitor dasatinib induces a marked adipogenic differentiation of human multipotent mesenchymal stromal cells. *PLoS ONE* 6: e28555.
- Guo, H., et al. 2011. Downregulation of p57 accelerates the growth and invasion of hepatocellular carcinoma. *Carcinogenesis* 32: 1897-1904.
- Vergara, D., et al. 2014. Antitumor activity of the dietary diterpene carnosol against a panel of human cancer cell lines. *Food Func.* 5: 1261-1269.
- Ferraro, A., et al. 2014. EZH2 regulates cofilin activity and colon cancer cell migration by targeting ITGA2 gene. *PLoS ONE* 9: e115276.
- Vergara, D., et al. 2014. Cytoskeletal alterations and biomechanical properties of parkin-mutant human primary fibroblasts. *Cell Biochem. Biophys.* E-published.
- Vergara, D., et al. 2015. Comparative proteomic profiling of Hodgkin lymphoma cell lines. *Mol. Biosyst.* 12: 219-232.

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Try **Cofilin (E-8): sc-376476**, our highly recommended monoclonal alternative to Cofilin (FL-166).