Technical Data Sheet

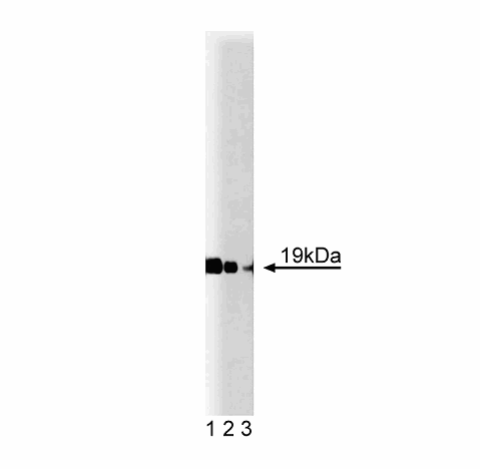
Purified Mouse Anti-Cofilin

Product Information

Material Number:	**612144**
Size:	50 µg
Concentration:	250 µg/ml
Clone:	32/Cofilin
Immunogen:	Mouse Cofilin aa. 3-98
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Mouse Tested in Development: Human, Dog, Rat
Target MW:	19 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

Cell motility is a basic cellular behavior involved in embryogenesis, neurite outgrowth, wound healing, inflammation, and cancer metastasis. Filamentous actin is an essential component of cell protrusions involved in cell motility. The protrusion formation is regulated by actin polymerization and depolymerization. Cofilin is a ubiquitously expressed G- and F-actin binding protein that contains a nuclear localization signal, a C-terminal hexapeptide sequence that is identical to tropomyosin, and other regions that are homologous to actin binding proteins. In vitro, cofilin has actin severing activity and induces an increased off-rate from the pointed end of actin filaments. These activities can increase the rate of actin polymerization and depolymerization, as well as increase the number of barbed ends available for polymerization. Stimulation of MTLn3 cells with EGF leads to an increase in cofilin at the leading edge of laemellipodia, which correlates with an increase in the number of barbed ends at the leading edge. Cofilin function blocking antibodies inhibit both the appearance of these barbed ends and lamellipodial protrusion. Thus, cofilin is an actin binding protein that regulates actin filament formation during cell motility.



Western blot analysis of Cofilin on mouse cerebrum lysate. *Lane 1: 1:2500, lane 2: 1:5000, lane 3: 1:10000 dilutuion of anti-Cofilin.*

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Store undiluted at -20° C.

Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Not Recommended

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Suggested Companion Products

Catalog Number	Name	Size	Clone
611455	Mouse Cerebrum Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
4. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.

References

Chan AY, Bailly M, Zebda N, Segall JE, Condeelis JS. Role of cofilin in epidermal growth factor-stimulated actin polymerization and lamellipod protrusion. *J Cell Biol.* 2000; 148(3):531-542.(Biology)

Moriyama K, Matsumoto S, Nishida E, Sakai H, Yahara I. Nucleotide sequence of mouse cofilin cDNA. *Nucleic Acids Res.* 1990; 18(10):3053.(Biology)

Moriyama K, Yahara I. Two activities of cofilin, severing and accelerating directional depolymerization of actin filaments, are affected differentially by mutations around the actin-binding helix. *EMBO J.* 1999; 18(23):6752-6761.(Biology)