

ARG20528 anti-Cofilin phospho (Ser3) antibody

Package: 50 µl
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes Cofilin phospho (Ser3)
Tested Reactivity	Hu, Ms, Rat, Chk
Tested Application	ELISA, ICC/IF, WB
Specificity	This antibody was cross-adsorbed to unphosphorylated Cofilin 1 peptide then affinity purified using phospho-Cofilin 1 (Ser-3) peptide (without carrier). The antibody detects a ~19 kDa protein corresponding to the molecular mass of phosphorylated Cofilin 1 on SDS-PAGE immunoblots of Jurkat cells. This band can be removed by lambda phosphatase treatment.
Host	Rabbit
Clonality	Polyclonal
Target Name	Cofilin
Species	Human
Immunogen	KLH-conjugated phosphospecific peptide around Ser3 in human Cofilin 1 protein. This sequence has 100% homology with similar regions of rat and mouse Cofilin 1, and has two amino acid differences from human Cofilin 2.
Conjugation	Un-conjugated
Alternate Names	CFL; 18 kDa phosphoprotein; Cofilin, non-muscle isoform; HEL-S-15; p18; cofilin; Cofilin-1

Application Instructions

Application table	Application	Dilution
	ELISA	1:2000
	ICC/IF	1:50
	WB	1:1000
Application Note	WB: Antibody is suggested to be diluted in 5% skimmed milk/Tris buffer with 0.04% Tween20 and incubated for 1 hour at room temperature. * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	

Properties

Form	Liquid
Purification	Affinity purification with immunogen.
Buffer	PBS, 50% Glycerol, 1 mg/ml BSA, and 0.05% Sodium azide
Preservative	0.05% Sodium azide
Stabilizer	50% Glycerol, 1 mg/ml BSA
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot

and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.

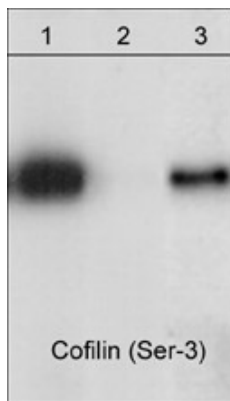
Note

For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Gene Symbol	CFL1
Gene Full Name	cofilin 1 (non-muscle)
Background	Members of the ADF/cofilin (AC) family are actin-severing proteins that regulate actin remodeling during cellular events such as cell migration, cytokinesis, phagocytosis, endocytosis, axon development, and immune cell activation. In mammals, there are three members of the AC family, muscle-specific cofilin (Cofilin 2), non-muscle cofilin (Cofilin 1), and ADF. In humans, cofilin 1 and ADF have 72% identity, with the major amino acid differences found in the C-terminal region. Regulation of cofilin activity can occur through serine phosphorylation. Activation of cofilin kinases, LIMK1 or LIMK2, leads to phosphorylation of cofilin at serine 3. This phosphorylation disrupts cofilin binding to actin in vitro and in vivo. Multiple phosphatases, PP1, PP2A, PP2B, slingshot, and chronophin can dephosphorylate Ser-3 and activate actin binding. Thus, Ser-3 phosphorylation is a major site for the regulation of cofilin activity.
Function	Binds to F-actin and exhibits pH-sensitive F-actin depolymerizing activity. Regulates actin cytoskeleton dynamics. Important for normal progress through mitosis and normal cytokinesis. Plays a role in the regulation of cell morphology and cytoskeletal organization. Required for the up-regulation of atypical chemokine receptor ACKR2 from endosomal compartment to cell membrane, increasing its efficiency in chemokine uptake and degradation. [UniProt]
Research Area	Cancer antibody; Cell Biology and Cellular Response antibody; Controls and Markers antibody; Neuroscience antibody; Signaling Transduction antibody
Calculated Mw	19 kDa
PTM	Inactivated by phosphorylation on Ser-3. Phosphorylated on Ser-3 in resting cells (By similarity). Dephosphorylated by PDXP/chronophin; this restores its activity in promoting actin filament depolymerization. The phosphorylation of Ser-24 may prevent recognition of the nuclear localization signal (By similarity). Phosphorylated via a ARRB1-RAC1-LIMK1-PAK1 cascade upon active ligand stimulation of atypical chemokine receptor ACKR2.

Images



ARG20528 anti-Cofilin phospho (Ser3) antibody WB image

Western blot: Jurkat cells 1) untreated or 2,3) treated with lambda phosphatase, 3) the phosphatase was inhibited with phospho-Cofilin 1 (Ser3) peptide. The blots were stained with ARG20528 anti-Cofilin phospho (Ser3) antibody.