

Cofilin (Phospho Ser3) Rabbit pAb

Catalog#: AP0070 | Size: 30µL/50µL/100µL

Main Information

Target	Host Species	Reactivity	Application	MW	Conjugated/Modification
Cofilin	Rabbit	Human, Mouse, Rat	WB, IHC, IF, ELISA	19kD (Observed)	Phospho

Detailed Information

Recommended Dilution Ratio	WB 1:500-1:2000; IHC 1:100-1:300; ELISA 1:10000; IF 1:50-200
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Specificity	Phospho-Cofilin (S3) Polyclonal Antibody detects endogenous levels of Cofilin protein only when phosphorylated at S3. The name of modified sites may be influenced by many factors, such as species (the modified site was not originally found in human samples) and the change of protein sequence (the previous protein sequence is incomplete, and the protein sequence may be prolonged with the development of protein sequencing technology). When naming, we will use the "numbers" in historical reference to keep the sites consistent with the reports. The antibody binds to the following modification sequence (lowercase letters are modification sites):MASGV
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Storage	-15°C to -25°C/1 year (Do not lower than -25°C)
Concentration	1 mg/ml
MW(Observed)	19kD
Modification	Phospho
Clonality	Polyclonal
Isotype	IgG

Antigen&Target Information

Immunogen	The antiserum was produced against synthesized peptide derived from human Cofilin around the phosphorylation site of Ser3. AA range:1-50
Specificity	Phospho-Cofilin (S3) Polyclonal Antibody detects endogenous levels of Cofilin protein only when phosphorylated at S3.The name of modified sites may be influenced by many factors, such as species (the modified site was not originally found in human samples) and the change of protein sequence (the previous protein sequence is incomplete, and the protein sequence may be prolonged with the development of protein sequencing technology). When naming, we will use the "numbers" in historical reference to keep the sites consistent with the reports. The antibody binds to the following modification sequence (lowercase letters are modification sites):MASGV
Gene Name	CFL1
Protein Name	Cofilin-1
Other Name	CFL1 ;CFL ;Cofilin-1 ;18 kDa phosphoprotein ;p18 ;Cofilin ;non-muscle isoform

Database Link

Organism	Gene ID	SwissProt
Human	3716	P23528
Mouse	12631	P18760
Rat	29271	P45592

Background

cofilin 1(CFL1) Homo sapiens The protein encoded by this gene can polymerize and depolymerize F-actin and G-actin in a pH-dependent manner. Increased phosphorylation of this protein by LIM kinase aids in Rho-induced reorganization of the actin cytoskeleton. Cofilin is a widely distributed intracellular actin-modulating protein that binds and depolymerizes filamentous F-actin and inhibits the polymerization of monomeric G-actin in a pH-dependent manner. It is involved in the translocation of actin-cofilin complex from cytoplasm to nucleus.[supplied by OMIM, Apr 2004].

Function

Function:Controls reversibly actin polymerization and depolymerization in a pH-sensitive manner. It has the ability to bind G- and F-actin in a 1:1 ratio of cofilin to actin. It is the major component of intranuclear and cytoplasmic actin rods.,online information:Cofilin entry,PTM:Phosphorylated on Ser-3 in resting cells.,similarity:Belongs to the actin-binding proteins ADF family.,similarity:Contains 1 ADF-H domain.,subcellular location:Almost completely in nucleus in cells exposed to heat shock or 10% dimethyl sulfoxide.,tissue specificity:Widely distributed in various tissues.

Cellular Localization

Nucleus matrix . Cytoplasm, cytoskeleton . Cell projection, ruffle membrane ; Peripheral membrane protein ; Cytoplasmic side . Cell projection, lamellipodium membrane ; Peripheral membrane protein ; Cytoplasmic side . Cell projection, lamellipodium . Cell projection, growth cone . Cell projection, axon . Colocalizes with the actin cytoskeleton in membrane ruffles and lamellipodia. Detected at the cleavage furrow and contractile ring during cytokinesis. Almost completely in nucleus in cells exposed to heat shock or 10% dimethyl sulfoxide.

Tissue Expression

Widely distributed in various tissues.

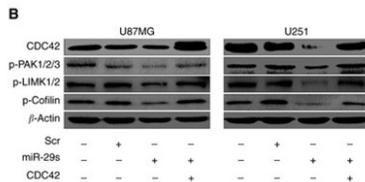
Research Areas

- Axon guidance
- Fc gamma R-mediated phagocytosis
- Regulation of actin cytoskeleton
- Pertussis
- Human immunodeficiency virus 1 infection

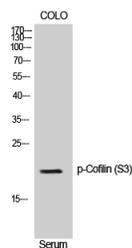
Signaling Pathway

Cellular Processes >> Cell growth and death >> Necroptosis
 Cellular Processes >> Cellular community - eukaryotes >> Signaling pathways regulating pluripotency of stem cells
 Organismal Systems >> Immune system >> Toll-like receptor signaling pathway
 Organismal Systems >> Immune system >> NOD-like receptor signaling pathway
 Organismal Systems >> Immune system >> Th1 and Th2 cell differentiation
 Organismal Systems >> Immune system >> Th17 cell differentiation
 Organismal Systems >> Development and regeneration >> Osteoclast differentiation
 Human Diseases >> Cancer: overview >> Pathways in cancer
 Human Diseases >> Cancer: overview >> PD-L1 expression and PD-1 checkpoint pathway in cancer
 Human Diseases >> Cancer: specific types >> Pancreatic cancer
 Environmental Information Processing >> Signal transduction >> JAK-STAT signaling pathway
 Environmental Information Processing >> Signal transduction >> PI3K-Akt signaling pathway

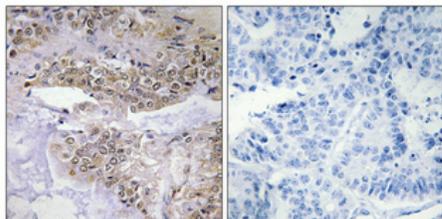
Validation Data



Shi, Cuijuan, et al. "miR-29a/b/c function as invasion suppressors for gliomas by targeting CDC42 and predict the prognosis of patients." *British Journal of Cancer* 117.7 (2017): 1036.



Western Blot analysis of NIH-3T3 cells using Phospho-Cofilin (S3) Polyclonal Antibody



Immunohistochemical analysis of paraffin-embedded Human lung cancer. Antibody was diluted at 1:100(4° overnight). High-pressure and temperature Tris-EDTA,pH8.0 was used for antigen retrieval. Negative contrl (right) obtained from antibody was pre-absorbed by immunogen peptide.

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