abcam

ab300128

Anti-Cofilin 2 antibody [EPR24519-7]

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR24519-7
Purification technique	Affinity purification Protein A
Concentration	0.464 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000
Notes	-

Species	Mouse
Dilution info	1/1000
Notes	-

Species	Rat
Dilution info	1/1000
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/2000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Mouse
Dilution info	1/2000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Rat
Dilution info	1/2000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/500
Notes	-

Species	Mouse
Dilution info	1/500
Notes	-

Expected

Species	Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

IP

Tested

Species	Human
Dilution info	1/30
Notes	-

Species	Mouse
Dilution info	1/30
Notes	-

Expected

Species	Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information CFL2

Function	Controls reversibly actin polymerization and depolymerization in a pH-sensitive manner. Its F-actin depolymerization activity is regulated by association with CSPR3 (PubMed:19752190). 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. Required for muscle maintenance. May play a role during the exchange of alpha-actin forms during the early postnatal remodeling of the sarcomere (By similarity).

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Cofilin 2 also referred to as CFL2 is an actin-binding protein that plays a significant role in actin dynamics by disassembling actin filaments. It has a molecular mass of approximately 19 kDa. This protein is expressed predominantly in muscle tissues

	including skeletal and cardiac muscle. Cofilin 2 is integral in the maintenance and reorganization of the actin cytoskeleton facilitating cellular movement and shape changes.
Biological function summary	Cofilin 2 is involved in processes including muscle contraction and cytoskeletal organization. It participates in the depolymerization of actin filaments thereby accelerating filament turnover and recycling. It does not function in isolation but interacts with several proteins in the cytoskeleton forming a complex interplay that modulates actin filament dynamics. Its activity is regulated by phosphorylation with specific kinases and phosphatases modulating its function based on cellular signals.
Pathways	Cofilin 2 is an important element of the actin reorganization pathway and is involved in the Rho family GTPase signaling pathway. It works closely with proteins like LIM kinase which phosphorylates cofilin and inhibits its activity and slingshot phosphatase which dephosphorylates and activates it. This regulation ensures proper actin filament dynamics which is essential for processes like cell division migration and muscle function.
Associated diseases and disorders	Cofilin 2 mutations have been associated with nemaline myopathy a muscle disorder characterized by muscle weakness. This disorder often involves abnormalities in the neuromuscular junction where cofilin 2 interacts with actin and related proteins like tropomyosin affecting muscle contraction. Additionally altered cofilin 2 expression links to cardiac complications due to its role in cardiac muscle maintenance and actin filament dynamics.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

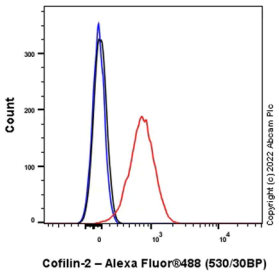
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

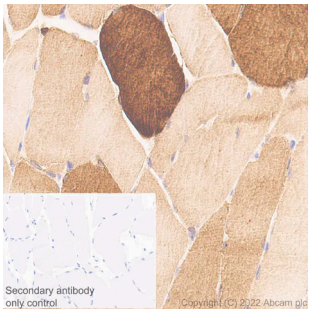
14 product images



Flow Cytometry (Intracellular) - Anti-Cofilin 2 antibody [EPR24519-7] (ab300128)

Cofilin 2 Flow Cytometry (Intracellular) staining of HeLa (human cervix adenocarcinoma epithelial cell) using rabbit Anti-Cofilin 2 antibody

Intracellular flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized HeLa (human cervix adenocarcinoma epithelial cell) cells labelling Cofilin 2 with ab300128 at 1/500 dilution (0.1 µg) (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/2000 dilution was used as the secondary antibody.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cofilin 2 antibody [EPR24519-7] (ab300128)

Cofilin 2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human skeletal muscle using rabbit Anti-Cofilin 2 antibody

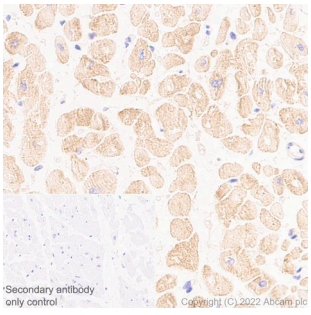
Immunohistochemical analysis of paraffin-embedded human skeletal muscl tissue labelling Cofilin 2 with ab300128 at 1/2000 (0.232 µg/ml) followed by a ready to use LeicaDS9800 (BOND™ Polymer Refine Detection).
Positive staining on human skeletal muscle (PMID: 24610938).

The section was incubated with ab300128 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument.

Counterstained with Hematoxylin.

Secondary antibody only control: PBS was used instead of primary antibody (ab300128) followed by ready to use secondary antibody LeicaDS9800 (BOND™ Polymer Refine Detection).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cofilin 2 antibody [EPR24519-7] (ab300128)

Cofilin 2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human cardiac muscle using rabbit Anti-Cofilin 2 antibody

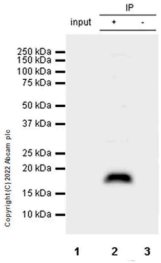
Immunohistochemical analysis of paraffin-embedded human cardiac muscle tissue labelling Cofilin 2 with ab300128 at 1/2000 (0.232 µg/ml) followed by a ready to use LeicaDS9800 (BOND™ Polymer Refine Detection) was used.
Positive staining on human cardiac muscle.

The section was incubated with ab300128 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument.

Counterstained with Hematoxylin.

Secondary antibody only control: PBS was used instead of primary antibody (ab300128) followed by ready to use secondary antibody LeicaDS9800 (BOND™ Polymer Refine Detection).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.



Immunoprecipitation - Anti-Cofilin 2 antibody [EPR24519-7] (ab300128)

Cofilin 2 was immunoprecipitated from 0.35 mg Raji (human Burkitt's lymphoma B lymphocyte) whole cell lysate 10µg with ab300128 at 1/30 dilution (2µg in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab300128 at 1/1000 dilution. VeriBlot for IP secondary antibody(HRP)(ab131366) was used at 1/5000 dilution.
Blocking and dilution buffer and concentration: 5% NFDM/TBST.

All lanes:
Immunoprecipitation - Anti-Cofilin 2 antibody [EPR24519-7] (ab300128) at 1/1000 dilution

Lane 1:
Raji (human Burkitt's lymphoma B lymphocyte) whole cell lysate at 10 µg

Lane 2:
ab300128 at 1/30 IP in Raji whole cell lysate at 10 µg

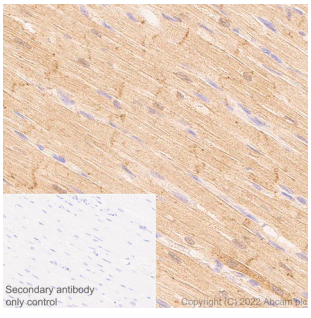
Lane 3:
Rabbit monoclonal IgG (ab172730) instead of ab300128 in Raji whole cell lysate at 10 µg

Secondary

All lanes:
Immunoprecipitation - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/5000 dilution

Observed band size: 18 kDa

Exposure time: 23.684s



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cofilin 2 antibody [EPR24519-7] (ab300128)

Cofilin 2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Rat cardiac muscle using rabbit Anti-Cofilin 2 antibody

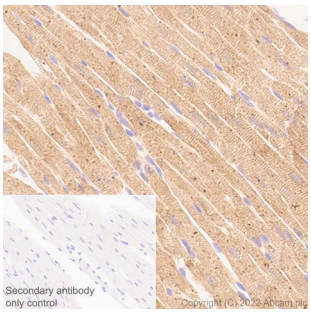
Immunohistochemical analysis of paraffin-embedded rat cardiac muscle tissue labelling Cofilin 2 with ab300128 at 1/2000 (0.232 µg/ml) followed by a ready to use LeicaDS9800 (BOND™ Polymer Refine Detection).
Positive staining on rat cardiac muscle.

The section was incubated with ab300128 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument.

Counterstained with Hematoxylin.

Secondary antibody only control: PBS was used instead of primary antibody (ab300128) followed by ready to use secondary antibody LeicaDS9800 (BOND™ Polymer Refine Detection).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cofilin 2 antibody [EPR24519-7] (ab300128)

Cofilin 2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Mouse cardiac muscle using rabbit Anti-Cofilin 2 antibody

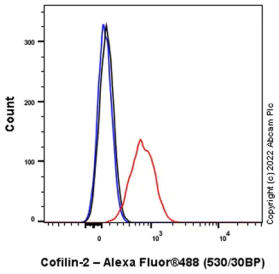
Immunohistochemical analysis of paraffin-embedded mouse cardiac muscle tissue labelling Cofilin 2 with ab300128 at 1/2000 (0.232 µg/ml) followed by a ready to use LeicaDS9800 (BOND™ Polymer Refine Detection).
Positive staining on mouse cardiac muscle (PMID: 11809832).

The section was incubated with ab300128 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument.

Counterstained with Hematoxylin.

Secondary antibody only control: PBS was used instead of primary antibody (ab300128) followed by ready to use secondary antibody LeicaDS9800 (BOND™ Polymer Refine Detection).

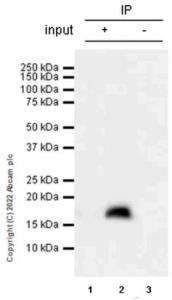
Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.



Flow Cytometry (Intracellular) - Anti-Cofilin 2 antibody [EPR24519-7] (ab300128)

Cofilin 2 Flow Cytometry (Intracellular) staining of C2C12 (mouse myoblasts) using rabbit Anti-Cofilin 2 antibody

Intracellular flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized C2C12 (mouse myoblasts) cells labelling Cofilin 2 with ab300128 at 1/500 dilution (0.1µg) (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/2000 dilution was used as the secondary antibody.



Immunoprecipitation - Anti-Cofilin 2 antibody [EPR24519-7] (ab300128)

Cofilin 2 was immunoprecipitated from 0.35 mg Mouse heart tissue lysate 10µg with ab300128 at 1/30 dilution (2µg in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab300128 at 1/1000 dilution. VeriBlot for IP secondary antibody(HRP)(ab131366) was used at 1/5000 dilution.
Blocking and dilution buffer and concentration: 5% NFDM/TBST.

All lanes:
Immunoprecipitation - Anti-Cofilin 2 antibody [EPR24519-7] (ab300128) at 1/1000 dilution

Lane 1:
Mouse heart tissue lysate at 10 µg

Lane 2:
ab300128 at 1/30 IP in mouse heart tissue lysate at 10 µg

Lane 3:
Rabbit monoclonal IgG (ab172730) instead of ab300128 in Mouse heart tissue lysate at 10 µg

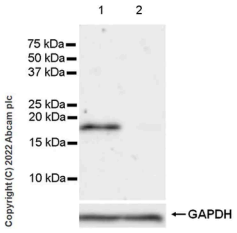
Secondary

All lanes:
Immunoprecipitation - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/5000 dilution

Observed band size: 18 kDa

Exposure time: 5.5s

Western blot - Anti-Cofilin 2 antibody [EPR24519-7] (ab300128)



Cofilin 2 Western blot staining using rabbit Anti-Cofilin 2 antibody

Blocking and dilution buffer and concentration: 5% NFDM/TBST.
In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining.

All lanes:
Western blot - Anti-Cofilin 2 antibody [EPR24519-7] (ab300128) at 1/1000 dilution

Lane 1:
Hela (human cervix adenocarcinoma epithelial cell) transfected with scrambled siRNA control, whole cell lysate at 20 µg

Lane 2:
Hela transfected with siRNA specifically targeting Cofilin-2, whole cell lysate at 20 µg

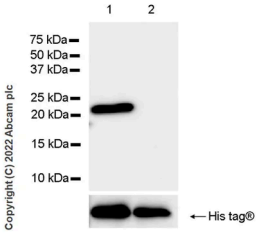
Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Observed band size: 18 kDa

Exposure time: 147s

Western blot - Anti-Cofilin 2 antibody [EPR24519-7] (ab300128)



Cofilin 2 Western blot staining using rabbit Anti-Cofilin 2 antibody

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

This antibody does not cross-react with human Cofilin 1.

Both recombinant proteins were expressed from E.coli expression systems.

All lanes:
Western blot - Anti-Cofilin 2 antibody [EPR24519-7] (ab300128) at 1/1000 dilution

Lane 1:
His-tagged human Cofilin 2 recombinant protein at 10 ng

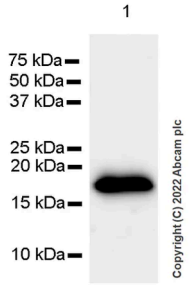
Lane 2:
His-tagged human Cofilin 1 recombinant protein at 10 ng

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Observed band size: 18 kDa

Exposure time: 26s



Western blot - Anti-Cofilin 2 antibody [EPR24519-7] (ab300128)

Cofilin 2 Western blot staining of Human skeletal muscle tissue lysate using rabbit Anti-Cofilin 2 antibody

Blocking and dilution buffer and concentration: 5% NFDM/TBST.
All lanes:
Western blot - Anti-Cofilin 2 antibody [EPR24519-7] (ab300128) at 1/1000 dilution

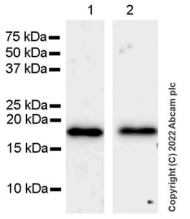
All lanes:
Human skeletal muscle tissue lysate at 20 µg

Secondary

All lanes:
Western blot - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/1000 dilution

Observed band size: 18 kDa

Exposure time: 37s



Western blot - Anti-Cofilin 2 antibody [EPR24519-7] (ab300128)

Cofilin 2 Western blot staining using rabbit Anti-Cofilin 2 antibody

Blocking and dilution buffer and concentration: 5% NFDM/TBST.
All lanes:
Western blot - Anti-Cofilin 2 antibody [EPR24519-7] (ab300128) at 1/1000 dilution

Lane 1:
HeLa (human cervix adenocarcinoma epithelial cell) whole cell lysate at 20 µg

Lane 2:
Raji (human Burkitt's lymphoma B lymphocyte) whole cell lysate at 20 µg

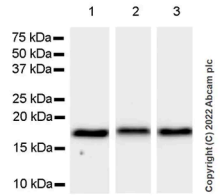
Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Observed band size: 18 kDa

Exposure time: 37s

Western blot - Anti-Cofilin 2 antibody [EPR24519-7] (ab300128)



Cofilin 2 Western blot staining using rabbit Anti-Cofilin 2 antibody

Blocking and dilution buffer and concentration: 5% NFDM/TBST.
All lanes:
Western blot - Anti-Cofilin 2 antibody [EPR24519-7] (ab300128) at 1/1000 dilution

Lane 1:
Mouse heart tissue lysate at 20 µg

Lane 2:
Mouse brain tissue lysate at 20 µg

Lane 3:
C2C12 (mouse myoblasts) whole cell lysate at 20 µg

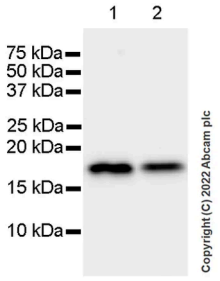
Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Observed band size: 18 kDa

Exposure time: 26s

Western blot - Anti-Cofilin 2 antibody [EPR24519-7] (ab300128)



Cofilin 2 Western blot staining using rabbit Anti-Cofilin 2 antibody

Blocking and dilution buffer and concentration: 5% NFDM/TBST.
All lanes:
Western blot - Anti-Cofilin 2 antibody [EPR24519-7] (ab300128) at 1/1000 dilution

Lane 1:
Rat heart tissue lysate at 20 µg

Lane 2:
Rat brain tissue lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Observed band size: 18 kDa

Exposure time: 26s

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.