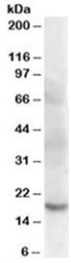
CFL2 Antibody / Skeletal Muscle Actin Regulator (R33482)

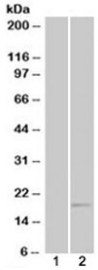
Catalog No.	Formulation	Size
R33482-100UG	0.5 mg/ml in 1X TBS, pH7.3, with 0.5% BSA (US sourced) and 0.02% sodium azide	100 ug

Bulk quote request

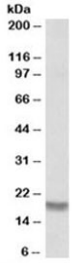
Availability	1-3 business days
Species Reactivity	Human, Rat
Predicted Reactivity	Mouse, Dog, Pig
Format	Antigen affinity purified
Host	Goat
Clonality	Polyclonal (goat origin)
Isotype	Goat Ig
Purity	Antigen affinity
Gene ID	1073
Localization	Cytoplasmic
Applications	Western blot: 0.01-0.03ug/ml IHC (FFPE): 3.75ug/ml ELISA (peptide) LOD: 1:128000
Limitations	This CFL2 Antibody / Skeletal Muscle Actin Regulator is available for research use only.



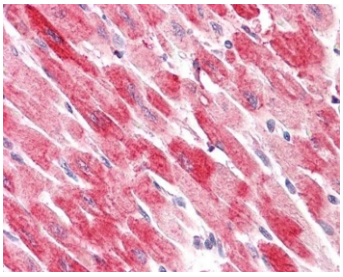
CFL2 Antibody in Human Skeletal Muscle WB. Western blot testing of human skeletal muscle lysate with CFL2 Antibody / Skeletal Muscle Actin Regulator at 0.003 ug/ml. A specific band is detected at approximately 19 kDa, consistent with the predicted molecular weight of cofilin-2. This CFL2 Antibody demonstrates detection of the skeletal muscle actin regulator in human muscle tissue.



CFL2 Antibody Overexpression Validation in HEK293 Cells WB. Western blot testing of HEK293 cell lysates with CFL2 Antibody / Skeletal Muscle Actin Regulator. Lane 1: mock-transfected HEK293 cells; Lane 2: HEK293 cells overexpressing human Cofilin 2. A band is detected at approximately 19 kDa with increased signal in the CFL2-overexpressing sample, supporting detection of human cofilin-2.



CFL2 Antibody in Rat Skeletal Muscle WB. Western blot testing of rat skeletal muscle lysate with CFL2 Antibody / Skeletal Muscle Actin Regulator at 0.001 ug/ml. A specific band is detected at approximately 19 kDa, consistent with the predicted molecular weight of cofilin-2. Detection in rat skeletal muscle supports the use of this CFL2 Antibody for studies of muscle actin regulation.



CFL2 Antibody in Human Heart IHC. Immunohistochemistry staining of FFPE human heart tissue with CFL2 Antibody / Skeletal Muscle Actin Regulator at 3.75 ug/ml. HIER was performed by steaming tissue sections in pH 6 citrate buffer, followed by alkaline phosphatase staining. The observed staining demonstrates cofilin-2 localization in human cardiac muscle tissue and complements the skeletal muscle validation of this antibody.

Description

CFL2 Antibody / Skeletal Muscle Actin Regulator detects cofilin-2, an actin-binding protein encoded by the CFL2 gene. Cofilin-2 belongs to the actin-depolymerizing factor (ADF)/cofilin family and has an important role in regulating actin filament turnover. CFL2 is particularly associated with skeletal and cardiac muscle, where controlled remodeling of the actin cytoskeleton contributes to the formation and maintenance of specialized contractile structures.

Cofilin-2 interacts with both globular actin (G-actin) and filamentous actin (F-actin) and promotes actin turnover through filament severing and depolymerization. These activities generate new filament ends and facilitate the reorganization of actin networks. Cofilin activity is regulated by mechanisms including phosphorylation and dephosphorylation, allowing extracellular and intracellular signals to influence cytoskeletal dynamics. Proper control of this process is important for maintaining cellular morphology, organization and function.

In skeletal muscle, CFL2 contributes to the organization and maintenance of sarcomeric actin filaments and myofibril architecture. Muscle development and contractile function require precise regulation of actin assembly and turnover, making cofilin-2 an important component of the muscle cytoskeletal machinery. CFL2 is also expressed in cardiac muscle and is studied in relation to actin organization within contractile tissues.

Disruption of CFL2 function can result in abnormal actin filament organization and impaired muscle structure. Pathogenic variants in CFL2 have been associated with congenital myopathies, including nemaline myopathy, linking cofilin-2 dysfunction with defects in skeletal muscle architecture and contractile function. As a skeletal muscle actin regulator, CFL2 is therefore relevant to studies of muscle development, myofibril organization, cytoskeletal remodeling and inherited muscle disease.

This goat polyclonal CFL2 Antibody has been evaluated using Western blot and immunohistochemistry, including detection in muscle-derived tissues and recombinant protein expression systems. NSJ Bioreagents supplies antibodies for research into cytoskeletal regulation and muscle biology. A CFL2 Antibody can be used to investigate skeletal muscle

actin regulation, cofilin-2 expression, myofibril organization and mechanisms associated with normal and abnormal muscle function.

For additional research on cofilin-2 function and cytoskeletal remodeling, see our Cofilin 2 Antibody / Actin Dynamics Marker page.

Application Notes

Optimal dilution of the CFL2 Antibody / Skeletal Muscle Actin Regulator should be determined by the researcher.

Immunogen

Amino acids DIKDRSTLGEK were used as the immunogen for this Cofilin 2 / CFL2 antibody.

Storage

Aliquot and store the Cofilin 2 / CFL2 antibody at -20oC.

Alternate Names

CFL2 antibody, Cofilin 2 antibody, Skeletal Muscle Actin Regulator antibody, Muscle Cofilin antibody

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