

Goat Anti-Cofilin 2 (muscle) Antibody

Peptide-affinity purified goat antibody Catalog # AF1259a

### Specification

# Goat Anti-Cofilin 2 (muscle) Antibody - Product Information

Application Primary Accession Other Accession Reactivity Predicted Host Clonality Concentration Isotype Calculated MW WB, E <u>O9Y281</u> <u>NP\_619579</u>, <u>1073</u> Human, Mouse, Rat Pig, Dog Goat Polyclonal 100ug/200ul IgG 18737

## Goat Anti-Cofilin 2 (muscle) Antibody - Additional Information

Gene ID 1073

**Other Names** Cofilin-2, Cofilin, muscle isoform, CFL2

Dilution WB~~1:1000 E~~N/A

Format

0.5 mg lgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions** Goat Anti-Cofilin 2 (muscle) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## Goat Anti-Cofilin 2 (muscle) Antibody - Protein Information

Name 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:<a



href="http://www.uniprot.org/citations/19752190" target="\_blank">19752190</a>). 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).

**Cellular Location** Nucleus matrix. Cytoplasm, cytoskeleton. Note=Colocalizes with CSPR3 in the Z line of sarcomeres.

**Tissue Location** Isoform CFL2b is expressed predominantly in skeletal muscle and heart. Isoform CFL2a is expressed in various tissues

### Goat Anti-Cofilin 2 (muscle) Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- <u>Cell Culture</u>

Goat Anti-Cofilin 2 (muscle) Antibody - Images

| 250kDa<br>150kDa |
|------------------|
| 100kDa<br>75kDa  |
| 50kDa            |
| 37kDa            |
| 25kDa            |
| 20kDa            |
| <br>15kDa        |
| 10kDa            |

AF1259a (0.003 µg/ml) staining of Human Skeletal Muscle lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

|   | 250kDa<br>150kDa<br>100kDa |
|---|----------------------------|
|   | 75kDa                      |
|   | 50kDa                      |
|   | 37kDa                      |
|   | 25kDa                      |
| - | 20kDa                      |
|   | 15kDa                      |

AF1259a (0.001  $\mu$ g/ml) staining of Rat Skeletal Muscle lysate (35  $\mu$ g protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

| 88             | _ |  |
|----------------|---|--|
| 98             | - |  |
| 62             | _ |  |
| 49             | _ |  |
| 38             | - |  |
| 28             | - |  |
| 17<br>14<br>63 | Ξ |  |

HEK293 overexpressing Human Muscle Cofilin 2 (RC222215) and probed with AF1259a (mock transfection in first lane), tested by Origene.

## Goat Anti-Cofilin 2 (muscle) Antibody - Background

This gene encodes an intracellular protein that is involved in the regulation of actin-filament dynamics. This protein is a major component of intranuclear and cytoplasmic actin rods. It can bind G- and F-actin in a 1:1 ratio of cofilin to actin, and it reversibly controls actin polymerization and depolymerization in a pH-dependent manner. Mutations in this gene cause nemaline myopathy type 7, a form of congenital myopathy. Alternative splicing results in multiple transcript variants.

## Goat Anti-Cofilin 2 (muscle) Antibody - References

Muscle LIM protein interacts with cofilin 2 and regulates F-actin dynamics in cardiac and skeletal muscle. Papalouka V, et al. Mol Cell Biol, 2009 Nov. PMID 19752190.

Cofilin activation in peripheral CD4 T cells of HIV-1 infected patients: a pilot study. Wu Y, et al. Retrovirology, 2008 Oct 17. PMID 18928553.

Nemaline myopathy with minicores caused by mutation of the CFL2 gene encoding the skeletal muscle actin-binding protein, cofilin-2. Agrawal PB, et al. Am J Hum Genet, 2007 Jan. PMID 17160903.

Global, in vivo, and site-specific phosphorylation dynamics in signaling networks. Olsen JV, et al. Cell, 2006 Nov 3. PMID 17081983.

Cofilin cross-bridges adjacent actin protomers and replaces part of the longitudinal F-actin interface. Kudryashov DS, et al. J Mol Biol, 2006 May 5. PMID 16530787.