

Calponin 1/2/3 (H-3): sc-133188

BACKGROUND

Calponin regulates smooth muscle cell contraction and is a marker of smooth muscle cell differentiation. Calponin, an Actin- and tropomyosin-binding protein, is characterized as an inhibitory factor of smooth-muscle actomyosin activity. Calponin is implicated in the regulation of smooth muscle contraction through its interaction with F-Actin and inhibition of the Actin-activated MgATPase activity of phosphorylated myosin. Both properties are lost following phosphorylation (primarily at Serine 175) by protein kinase C or calmodulin-dependent protein kinase II. The three forms of Calponin, Calponin 1 (basic Calponin), Calponin 2 (neutral Calponin) and Calponin 3 (acidic Calponin) are found in smooth muscle tissue. Additionally, Calponin 2 is found in heart muscle tissue and Calponin 3 is found in the brain.

REFERENCES

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6. Yoshimoto, R., Hori, M., Ozaki, H. and Karaki, H. 2000. Proteolysis of acidic calponin by μ -calpain. *J. Biochem.* 128: 1045-1049.

SOURCE

Calponin 1/2/3 (H-3) is a mouse monoclonal antibody raised against amino acids 1-297 representing full length Calponin 1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₃ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

APPLICATIONS

Calponin 1/2/3 (H-3) is recommended for detection of Calponin 1 of mouse, rat and human origin, and Calponin 2 and Calponin 3 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); may cross-react with Calponin 3 of mouse and rat origin.

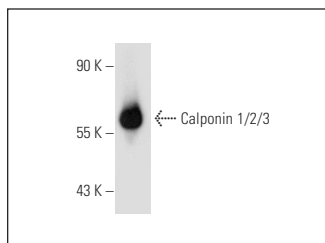
Suitable for use as control antibody for Calponin 1/2/3 siRNA (h): sc-43657, Calponin 1/2/3 shRNA Plasmid (h): sc-43657-SH and Calponin 1/2/3 shRNA (h) Lentiviral Particles: sc-43657-V.

Molecular Weight of Calponin 1/2/3: 33-36 kDa.

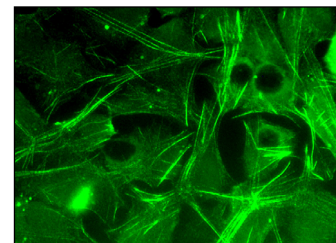
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Calponin 1/2/3 (H-3): sc-133188. Western blot analysis of human recombinant Calponin 1/2/3.



Calponin 1/2/3 (H-3): sc-133188. Immunofluorescence staining of formalin-fixed Hep G2 cells showing cytoskeletal localization.

RESEARCH USE

For research use only, not for use in diagnostic procedures.



See **Calponin 1 (CALP): sc-58707** for Calponin 1 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.