**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.

**SOURCE**

Calponin 1/2/3 (G-10) is a mouse monoclonal antibody raised against amino acids 1-297 representing full length Calponin 1 of human origin.

**PRODUCT**

Each vial contains 200 µg IgG1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Calponin 1/2/3 (G-10) is available conjugated to agarose (sc-136987 AC), 500 µg/0.25 ml agarose in 1 ml, for IP, to HRP (sc-136987 HRP), 200 µg/ml, for WB, HRP and ELISA; to either phycocyanin (sc-136987 PE), fluorescein (sc-136987 FITC), Alexa Fluor® 488 (sc-136987 AF488), Alexa Fluor® 546 (sc-136987 AF546), Alexa Fluor® 594 (sc-136987 AF594) or Alexa Fluor® 647 (sc-136987 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-136987 AF680) or Alexa Fluor® 790 (sc-136987 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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**APPLICATIONS**

Calponin 1/2/3 (G-10) 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 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 siRNA (m): sc-43274, Calponin 1/2/3 shRNA Plasmid (h): sc-43657-SH, Calponin 1 shRNA Plasmid (m): sc-43274-SH, Calponin 1/2/3 shRNA (h) Lentiviral Particles: sc-43657-V and Calponin 1 shRNA (m) Lentiviral Particles: sc-43274-V.

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

Positive Controls: JEG-3 whole cell lysate: sc-364255.

**RESEARCH USE**

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

**STORAGE**

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

**DATA**

**SELECT PRODUCT CITATIONS**


**PROTOCOLS**

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