**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**


**CHROMOSOMAL LOCATION**

Genetic locus: CNN1 (human) mapping to 19p13.2; Cnn1 (mouse) mapping to 9 A3.

**SOURCE**

Calponin 1 (SPM169) is a mouse monoclonal antibody raised against crude human uterus extract.

**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.

**APPLICATIONS**

Calponin 1 (SPM169) is recommended for detection of Calponin 1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:10000), 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) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Calponin 1 siRNA (h): sc-43273, Calponin 1 siRNA (m): sc-43274, Calponin 1 shRNA Plasmid (h): sc-43273-SH, Calponin 1 shRNA Plasmid (m): sc-43274-SH, Calponin 1 shRNA (h) Lentiviral Particles: sc-43273-V and Calponin 1 shRNA (m) Lentiviral Particles: sc-43274-V.

Molecular Weight of Calponin 1: 33-36 kDa.

Positive Controls: rat heart extract: sc-2393, KNRK whole cell lysate: sc-2214 or HeLa whole cell lysate: sc-2200.

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048.
2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

**DATA**

Calponin 1 (SPM169): sc-52992. Western blot analysis of Calponin 1 expression in rat heart tissue extract.

**STORAGE**

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

**RESEARCH USE**

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

**PROTOCOLS**

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

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

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**SANTA CRUZ BIOTECHNOLOGY, INC.**

**Calponin 1 (SPM169): sc-52992**