**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.

**CHROMOSOMAL LOCATION**

Genetic locus: CNN1 (human) mapping to 19p13.2; CNN3 (human) mapping to 1p21.3; Cnn1 (mouse) mapping to 9 A3; Cnn3 (mouse) mapping to 3 G1.

**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.

**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-43857, Calponin 1/2/3 shRNA Plasmid (h): sc-43857-SH and Calponin 1/2/3 shRNA (h) Lentiviral Particles: sc-43857-V.

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

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

**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.

**RESEARCH USE**

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

**DATA**

Calponin 1/2/3 (G-10): sc-136987. Western blot analysis of Calponin 1/2/3 expression in 293T (A) and JEG-3 (B) whole cell lysates.

Calponin 1/2/3 (G-10): sc-136987. Immunofluorescence staining of formalin-fixed Hep G2 cells showing cytoskeletal localization (A) and immunochemistry staining of formalin fixed, paraffin-embedded human smooth muscle tissue showing cytoplasmic staining of smooth muscle cells (B).

**SELECT PRODUCT CITATIONS**


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