

Calponin 2 (C-15): sc-16608

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

1. Tang, D.C., et al. 1996. Structure-function relations of smooth muscle Calponin. The critical role of serine 175. *J. Biol. Chem.* 271: 8605-8611.
2. Masuda, H., et al. 1996. Molecular cloning and characterization of human non-smooth muscle Calponin. *J. Biochem.* 120: 415-424.
3. Doi, M., et al. 1997. Reduced expression of Calponin in canine basilar artery after subarachnoid haemorrhage. *Acta Neurochir.* 139: 77-81.
4. Kaneko, T., et al. 2000. Identification of Calponin as a novel substrate of Rho-kinase. *Biochem. Biophys. Res. Commun.* 273: 110-116.
5. di Gioia, C.R., et al. 2000. Angiotensin II increases Calponin expression in cultured rat vascular smooth muscle cells. *Biochem. Biophys. Res. Commun.* 279: 965-969.

CHROMOSOMAL LOCATION

Genetic locus: CNN2 (human) mapping to 19p13.3; Cnn2 (mouse) mapping to 10 C1.

SOURCE

Calponin 2 (C-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Calponin 2 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-16608 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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 or our catalog for detailed protocols and support products.

APPLICATIONS

Calponin 2 (C-15) is recommended for detection of calponin 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

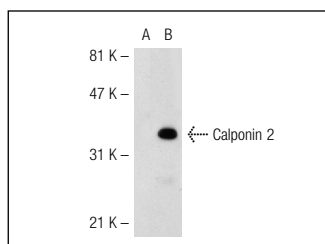
Calponin 2 (C-15) is also recommended for detection of calponin 2 in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for Calponin 2 siRNA (h): sc-29891, Calponin 2 siRNA (m): sc-29892, Calponin 2 shRNA Plasmid (h): sc-29891-SH, Calponin 2 shRNA Plasmid (m): sc-29892-SH, Calponin 2 shRNA (h) Lentiviral Particles: sc-29891-V and Calponin 2 shRNA (m) Lentiviral Particles: sc-29892-V.

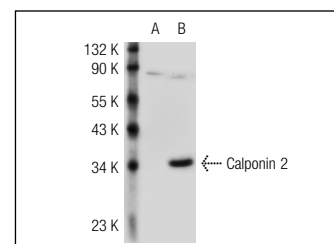
Molecular Weight of Calponin 2: 37 kDa.

Positive Controls: Calponin 2 (h): 293T Lysate: sc-112525, Calponin 2 (m): 293T Lysate: sc-118970 or rat heart extract: sc-2393.

DATA



Calponin 2 (C-15): sc-16608. Western blot analysis of Calponin 2 expression in non-transfected: sc-117752 (A) and human Calponin 2 transfected: sc-112525 (B) 293T whole cell lysates.



Calponin 2 (C-15): sc-16608. Western blot analysis of Calponin 2 expression in non-transfected: sc-117752 (A) and mouse Calponin 2 transfected: sc-118970 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Debold, M., et al. 2011. Identification of specific nuclear structural protein alterations in human breast cancer. *J. Cell. Biochem.* 112: 3176-3184.

RESEARCH USE

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



Try **Calponin 1/2/3 (G-10): sc-136987**, our highly recommended monoclonal alternative to Calponin 2 (C-15).