SANTA CRUZ BIOTECHNOLOGY, INC.

Calumenin (H-40): sc-98983

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Caluminin is a 315 amino acid Ca^{2+}-binding member of the CREC, EF-hand protein family. Calumenin is a secreted protein that contains six Ca^{2+}-binding (EF-hand) motifs and is expressed in the lumen of the endoplasmic reticulum (ER) and Golgi apparatus. In the presence of Ca^{2+}, Calumenin interacts with serum amyloid P component (SAP) and, together, they may play a role in the immunological defense system and participate in amyloidosis, the pathological formation of amyloid deposits in different types of tissues. Calumenin has an inhibitory effect on the vitamin K-dependent γ-carboxylation system which converts vitamin K-dependent proteins to Gla-containing proteins. Calumenin may also be involved in the pathophysiology of thrombosis and/or wound healing by acting in an autocrine or paracrine manner.

REFERENCES

1. Yabe, D., et al. 1997. Calumenin, a Ca^{2+}-binding protein retained in the endoplasmic reticulum with a novel carboxyl-terminal sequence, HDEF. J. Biol. Chem. 272: 18232-18239.
2. Vorum, H., et al. 1999. Human calumenin localizes to the secretory pathway and is secreted to the medium. Exp. Cell Res. 248: 473-481.

CHROMOSOMAL LOCATION

Genetic locus: CALU (human) mapping to 7q32.1; Calu (mouse) mapping to 6 A3.3.

SOURCE

Calumenin (H-40) is a rabbit polyclonal antibody raised against amino acids 89-128 mapping within an internal region of Calumenin 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.

APPLICATIONS

Calumenin (H-40) is recommended for detection of Calumenin 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).

Calumenin (H-40) is also recommended for detection of Calumenin in additional species, including equine, canine and porcine.

Suitable for use as control antibody for Calumenin siRNA (h): sc-60320, Calumenin siRNA (m): sc-60321, Calumenin shRNA Plasmid (h): sc-60320-SH, Calumenin shRNA Plasmid (m): sc-60321-SH, Calumenin shRNA (h) Lentiviral Particles: sc-60320-V and Calumenin shRNA (m) Lentiviral Particles: sc-60321-V.

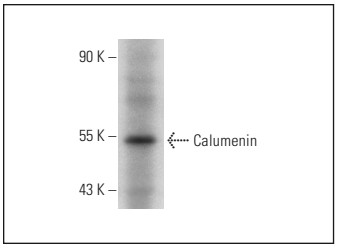
Molecular Weight of Calumenin: 52/57 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203 or mouse kidney extract: sc-2255.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), 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). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Calumenin (H-40): sc-98983. Western blot analysis of Calumenin expression in mouse kidney tissue extract.

SELECT PRODUCT CITATIONS

1. Amodio, G., et al. 2011. Proteomic signatures in thapsigargin-treated hepatoma cells. Chem. Res. Toxicol. 24: 1215-1222.
2. Teng, L., et al. 2012. Proteomic identification of calumenin as a G551D-CFTR associated protein. PLoS ONE 7: e40173.
3. Torres, S., et al. 2013. Proteome profiling of cancer-associated fibroblasts identifies novel proinflammatory signatures and prognostic markers for colorectal cancer. Clin. Cancer Res. 19: 6006-6019.

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 or our catalog for detailed protocols and support products.