

Calcipressin-2/3 (H-213): sc-98746

BACKGROUND

Calcineurin is a Ca^{2+} dependent protein phosphatase that is involved in several neuronal functions. Proteins belonging to the RCAN (regulator of calcineurin) family modulate the activity of Calcineurin through a valine-rich region within their carboxyl tail. RCANs compete with NFATs (nuclear factor of activated T-cells) for binding to the same docking site in calcineurin, which results in either inhibition or activation of calcineurin activity. Calcipressin-2, also known as RCAN2 and DSCR1L1 (Down syndrome candidate region 1-like 1), is a 197 amino acid protein that is highly expressed in both the cytoplasm and nucleus of neurons and is the only RCAN family member that is found in glial cells. Calcipressin-3, also known as RCAN3 and DSCR1L2 (Down syndrome candidate region 1-like protein 2), is a 241 amino acid protein that potentially is involved in central nervous system development. Calcipressin-3 interacts with cardiac troponin I, suggesting that it may play a role in cardiac contraction events.

REFERENCES

1. Qin, L., et al. 2006. Down syndrome candidate region 1 isoform 1 mediates angiogenesis through the calcineurin-NFAT pathway. *Mol. Cancer Res.* 4: 811-820.
2. Mulero, M.C., et al. 2007. RCAN3, a novel calcineurin inhibitor that down-regulates NFAT-dependent cytokine gene expression. *Biochim. Biophys. Acta* 1773: 330-341.
3. Porta, S., et al. 2007. Differential expression of members of the RCAN family of calcineurin regulators suggests selective functions for these proteins in the brain. *Eur. J. Neurosci.* 26: 1213-1226.
4. Gollogly, L.K., et al. 2007. Down syndrome candidate region 1-like 1 (DSCR1-L1) mimics the inhibitory effects of DSCR1 on calcineurin signaling in endothelial cells and inhibits angiogenesis. *J. Surg. Res.* 142: 129-136.
5. Facchin, F., et al. 2008. Identification and analysis of human RCAN3 (DSCR1L2) mRNA and protein isoforms. *Gene* 407: 159-168.
6. Liu, X., et al. 2008. Transcription enhancer factor 3 (TEF3) mediates the expression of Down syndrome candidate region 1 isoform 1 (DSCR1-1L) in endothelial cells. *J. Biol. Chem.* 283: 34159-34167.

CHROMOSOMAL LOCATION

Genetic locus: RCAN2 (human) mapping to 6p21.1, RCAN3 (human) mapping to 1p36.11; Rcan2 (mouse) mapping to 17 B3, Rcan3 (mouse) mapping to 4 D3.

SOURCE

Calcipressin-2/3 (H-213) is a rabbit polyclonal antibody raised against amino acids 30-241 mapping at the C-terminus of Calcipressin-3 of human origin.

PRODUCT

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

STORAGE

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

APPLICATIONS

Calcipressin-2/3 (H-213) is recommended for detection of Calcipressin-2 and Calcipressin-3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

Calcipressin-2/3 (H-213) is also recommended for detection of Calcipressin-2 and Calcipressin-3 in additional species, including equine, canine, bovine and avian.

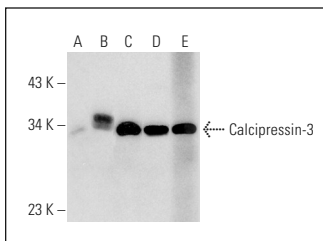
Molecular Weight of Calcipressin-2/3: 22/27 kDa.

Positive Controls: Calcipressin-3 (h): 293T Lysate: sc-115421, human kidney extract: sc-363764 or HeLa whole cell lysate: sc-2200.

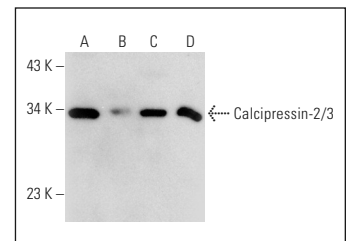
RECOMMENDED SECONDARY REAGENTS

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



Calcipressin-2/3 (H-213): sc-98746. Western blot analysis of Calcipressin-3 expression in non-transfected 293T: sc-117752 (A), human Calcipressin-3 transfected 293T: sc-115421 (B), HT-29 (C) and PC-3 (D) whole cell lysates and human kidney tissue extract (E).



Calcipressin-2/3 (H-213): sc-98746. Western blot analysis of Calcipressin-2/3 expression in NCI-H460 (A), MIA PaCa-2 (B), MCF7 (C) and HeLa (D) whole cell lysates.

RESEARCH USE

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



Try **Calcipressin-2/3 (B-9): sc-374454** or **Calcipressin-2/3 (F-7): sc-374453**, our highly recommended monoclonal alternatives to Calcipressin-2/3 (H-213).