SANTA CRUZ BIOTECHNOLOGY, INC.

CaM (FL-149): sc-5537



BACKGROUND

The level of intracellular calcium is tightly regulated in all eukaryotic cells. A modest increase in this level can result in a myriad of physiological responses, most of which are mediated by calmodulin (CaM), the universal calcium sensor. CaM directly modulates the activity of protein kinases and phosphatases, ion channels and nitric oxide synthetases. It is generally involved in such diverse processes as cell proliferation, endocytosis, cellular adhesion, protein turn over and smooth muscle contraction. CaM (calmodulin) is an acidic protein, 148 amino acids in length, with 4 helix-loop-helix calcium binding domains. In humans, three distinct genes have been identified (CALM1, CALM2 and CALM3); each encoding the identical protein. CALML3 (calmodulin-related protein NB-1) shares significant sequence identity with CaM and it is suggested that it may competitively bind CaM substrates. Interestingly, CaM has been shown to associate with the carboxy terminus of the dystrophin gene product, implying that it may regulate its activity.

SOURCE

CaM (FL-149) is a rabbit polyclonal antibody raised against amino acids 1-149 representing full length CaM I of human origin.

PRODUCT

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

Available as agarose conjugate for immunoprecipitation, sc-5537 AC, 500 $\mu g/0.25$ ml agarose in 1 ml.

APPLICATIONS

CaM (FL-149) is recommended for detection of calmodulin and CALML3 (calmodulin-like 3) 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)], immunofluo-rescence (starting dilution 1:50, dilution range 1:50-1:500), immunohisto-chemistry (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).

CaM (FL-149) is also recommended for detection of calmodulin and CALML3 (calmodulin-like 3) in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of CaM: 17 kDa.

Positive Controls: CALML3 (h): 293T Lysate: sc-113991.

STORAGE

Store at 4° C, **D0 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.

RESEARCH USE

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

DATA



CaM (FL-149): sc-5537. Western blot analysis of CALML3 expression in non-transfected: sc-117752 (A) and human CALML3 transfected: sc-113991 (B) 293T whole cell lysates.

plasmic localization (B).
SELECT PRODUCT CITATIONS

of methanol-fixed SJRH30 cells showing membrane

and cytoplasmic localization (A). Immunofluorescence

staining of methanol-fixed HeLa cells showing cyto-

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- 5. Leidi, M., et al. 2010. The effects of silencing EDF-1 in human endothelial cells. Atherosclerosis 211: 55-60.
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- Suman, S., et al. 2011. A calcium-insensitive attenuated nitrosative stress response contributes significantly in the radioresistance of Sf9 insect cells. Int. J. Biochem. Cell Biol. 43: 1340-1353.

MONOS Satisfation Guaranteed

Try **CaM (G-3):** sc-137079, our highly recommended monoclonal alternative to CaM (FL-149). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **CaM (G-3):** sc-137079.