

CaM (L-20): sc-34082

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 calmodulin is an acidic protein, 148 amino acids in length, with 4 helix-loop-helix calcium binding domains. Interestingly, calmodulin has been shown to associate with the carboxy terminus of the dystrophin gene product, implying that it may regulate its activity.

REFERENCES

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8. Anderson, J.T., et al. 1996. Ca²⁺-calmodulin binds to the carboxyl-terminal domain of dystrophin. *J. Biol. Chem.* 271: 6605-6610.
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CHROMOSOMAL LOCATION

Genetic locus: CAMK2A (human) mapping to 5q32, CALML3 (human) mapping to 10p15.1; Camk2a (mouse) mapping to 18 E1, Calml3 (mouse) mapping to 13 A1.

SOURCE

CaM (L-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of CaM I of human origin.

STORAGE

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

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-34082 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CaM (L-20) 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), 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).

CaM (L-20) 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: Rat brain extract: sc-2392, rat liver extract: sc-2395 or mouse brain extract: sc-2253.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.