

CALML5 (A-3): sc-393637

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. CaM is generally involved in such diverse processes as cell proliferation, endocytosis, cellular adhesion, protein turnover and smooth muscle contraction. CALML5 (calmodulin-like 5), also known as CLSP, is a 146 amino acid protein that contains four EF-hand domains and shares functional similarity with CaM. Related to the calmodulin family of calcium binding proteins, CALML5 is a novel calcium binding protein expressed in the epidermis. CALML5 interacts with TGase3 and may be involved in terminal differentiation of keratinocytes.

CHROMOSOMAL LOCATION

Genetic locus: CALML5 (human) mapping to 10p15.1.

SOURCE

CALML5 (A-3) is a mouse monoclonal antibody raised against amino acids 1-124 mapping at the N-terminus of CALML5 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CALML5 (A-3) is available conjugated to agarose (sc-393637 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393637 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393637 PE), fluorescein (sc-393637 FITC), Alexa Fluor® 488 (sc-393637 AF488), Alexa Fluor® 546 (sc-393637 AF546), Alexa Fluor® 594 (sc-393637 AF594) or Alexa Fluor® 647 (sc-393637 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393637 AF680) or Alexa Fluor® 790 (sc-393637 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

CALML5 (A-3) is recommended for detection of CALML5 of human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (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).

Suitable for use as control antibody for CALML5 siRNA (h): sc-72779, CALML5 shRNA Plasmid (h): sc-72779-SH and CALML5 shRNA (h) Lentiviral Particles: sc-72779-V.

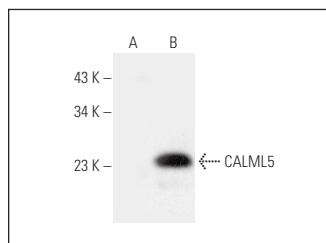
Molecular Weight of CALML5: 16 kDa.

Positive Controls: CALML5 (h2): 293T Lysate: sc-375033.

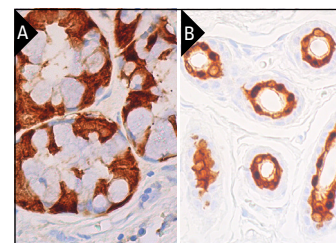
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



CALML5 (A-3): sc-393637. Western blot analysis of CALML5 expression in non-transfected: sc-117752 (A) and human CALML5 transfected: sc-375033 (B) 293T whole cell lysates.



CALML5 (A-3): sc-393637. Immunoperoxidase staining of formalin fixed, paraffin-embedded human salivary gland tissue showing cytoplasmic and nuclear staining of glandular cells (A), and of human sweat gland tissue showing cytoplasmic and nuclear staining of glandular cells. Blocked with 0.25X UltraCruz® Blocking Reagent: sc-516214. Detected with m-IgGκ BP-B: sc-516142 and ImmunoCruz® ABC Kit: sc-516216 (B).

SELECT PRODUCT CITATIONS

- Wang, S., et al. 2020. Single cell transcriptomics of human epidermis identifies basal stem cell transition states. *Nat. Commun.* 11: 4239.
- Kanamori, K., et al. 2023. CALML5 is a novel diagnostic marker for differentiating thymic squamous cell carcinoma from type B3 thymoma. *Thorac. Cancer* 14: 1089-1097.

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 for detailed protocols and support products.