SANTA CRUZ BIOTECHNOLOGY, INC.

CAPS1 (6D8): sc-134298

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

CAPS1 (calcyphosine), also known as thyroid protein p24, is a 189 amino acid cytoplasmic protein containing four EF-hand domains which serve as calcium-binding sites, and was first identified in canine thyroid. Interestingly, CAPS1 is much less abundant in humans than in canines. Synthesis and phosphorylation of CAPS1 is upregulated by cAMP-agonists in thyrocytes. CAPS1 likely functions in the regulation of ionic transport and may be involved in cross-signaling between cAMP and Ca^{2+}-phophatidylinositol cascades. In addition to thyriod, CAPS1 is expressed in brain, salivary glands and lung. Expression of CAPS1 is increased in endometrial cancer and prognosis seems to be dependent on the level of CAPS1 expression, indicating that CAPS1 may be an appropriate prognostic marker for patient survival.

REFERENCES

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2. Lecocq, R., et al. 1995. Rapid purification and identification of calcyphosine, a Ca^{2+}-binding protein phosphorylated by protein kinase A. Biochem. J. 306: 147-151.
3. Clément, S., et al. 1997. Loss of calcyphosine gene expression in mouse and other rodents. Biochem. Biophys. Res. Commun. 232: 407-413.
4. El Housni, H., et al. 1997. Cloning and sequence analysis of human calcyphosine complementary DNA. Biochim. Biophys. Acta 1352: 249-252.
5. El Housni, H., et al. 1997. Production of dog calcyphosine in bacteria and lack of phosphorylation by the catalytic subunit of protein kinase A *in vitro*. Mol. Cell. Endocrinol. 135: 93-97.
6. Halleux, P., et al. 1998. Calcium binding protein calcyphosine in dog central astrocytes and ependymal cells and in peripheral neurons. J. Chem. Neuroanat. 15: 239-250.
7. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 114212. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
8. Li, Z., et al. 2008. Prognostic evaluation of epidermal fatty acid-binding protein and calcyphosine, two proteins implicated in endometrial cancer using a proteomic approach. Int. J. Cancer 123: 2377-2383.
9. Dong, H., et al. 2008. Crystal-structure and biochemical characterization of recombinant human calcyphosine delineates a novel EF-hand-containing protein family. J. Mol. Biol. 383: 455-464.

CHROMOSOMAL LOCATION

Genetic locus: CAPS (human) mapping to 19p13.3.

SOURCE

CAPS1 (6D8) is a mouse monoclonal antibody raised against recombinant CAPS1 protein of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 100 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

CAPS1 (6D8) is recommended for detection of CAPS1 of 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CAPS1 siRNA (h): sc-97488, CAPS1 shRNA Plasmid (h): sc-97488-SH and CAPS1 shRNA (h) Lentiviral Particles: sc-97488-V.

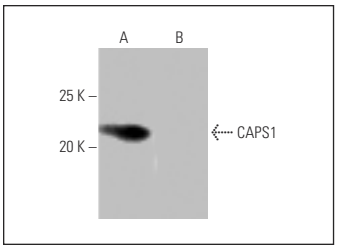
Molecular Weight of CAPS1: 24 kDa.

Positive Controls: human CAPS1 transfected 293T whole cell lysate.

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).

DATA



CAPS1 (6D8): sc-134298. Western blot analysis of CAPS1 expression in human CAPS1 transfected (**A**) and non-transfected (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Johansson, H.J., et al. 2015. Proteomics profiling identify CAPS as a potential predictive marker of tamoxifen resistance in estrogen receptor positive breast cancer. Clin. Proteomics 12: 8.

STORAGE

Store at 4° C, **DO 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 for detailed protocols and support products.