CALML3 (h3): 293T Lysate: sc-173235



The Power to Question

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. CALML3 (calmodulin-like protein 3), also known as CLP, is a 149 amino acid protein that contains four EF-hand domains and shares functional similarity with CaM. Expressed in epidermal, mammary, prostate and cervical tissues, CALML3 is thought to play a role in calcium regulation and signaling events throughout and cell and may, in fact, compete with CaM by binding to different cellular substrates.

REFERENCES

- Yaswen, P., Smoll, A., Peehl, D.M., Trask, D.K., Sager, R. and Stampfer, M.R. 1990. Downregulation of a calmodulin-related gene during transformation of human mammary epithelial cells. Proc. Natl. Acad. Sci. USA 87: 7360-7364.
- Rhyner, J.A., Koller, M., Durussel-Gerber, I., Cox, J.A. and Strehler, E.E. 1992. Characterization of the human calmodulin-like protein expressed in Escherichia coli. Biochemistry 31: 12826-12832.
- Durussel, I., Rhyner, J.A., Strehler, E.E. and Cox, J.A. 1993. Cation binding and conformation of human calmodulin-like protein. Biochemistry 32: 6089-6094
- Berchtold, M.W., Koller, M., Egli, R., Rhyner, J.A., Hameister, H. and Strehler, E.E. 1993. Localization of the intronless gene coding for calmodulin-like protein CLP to human chromosome 10p13-ter. Hum. Genet. 90: 496-500.
- Rogers, M.S., Kobayashi, T., Pittelkow, M.R. and Strehler, E.E. 2001. Human calmodulin-like protein is an epithelial-specific protein regulated during keratinocyte differentiation. Exp. Cell Res. 267: 216-224.
- Han, B.G., Han, M., Sui, H., Yaswen, P., Walian, P.J. and Jap, B.K. 2002. Crystal structure of human calmodulin-like protein: insights into its functional role. FEBS Lett. 521: 24-30.
- 7. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 114184. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- Bennett, R.D., Mauer, A.S. and Strehler, E.E. 2007. Calmodulin-like protein increases filopodia-dependent cell motility via upregulation of Myosin X. J. Biol. Chem. 282: 3205-3212.
- 9. Bennett, R.D., Caride, A.J., Mauer, A.S. and Strehler, E.E. 2008. Interaction with the IQ3 motif of Myosin X is required for calmodulin-like protein-dependent filopodial extension. FEBS Lett. 582: 2377-2381.

CHROMOSOMAL LOCATION

Genetic locus: CALML3 (human) mapping to 10p15.1.

PRODUCT

CALML3 (h3): 293T Lysate represents a lysate of human CALML3 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

CALML3 (h3): 293T Lysate is suitable as a Western Blotting positive control for human reactive CALML3 antibodies. Recommended use: 10-20 μ l per lane

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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.

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3800 fax 831.457.3801 **Europe** +00800 4573 8000 49 6221 4503 0 **www.scbt.com**