SANTA CRUZ BIOTECHNOLOGY, INC.

MYPT3 (h): 293T Lysate: sc-116021

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The Power to Question

BACKGROUND

The members of the MYPT family, MYPT1, MYPT2 and MYPT3 are the myosin-binding subunits of myosin phosphatase and an integral component of the myosin protein phosphatase. myosin phosphatase regulates the interaction of actin and myosin downstream of the guanosine triphosphatase Rho. MYPT1 is localized on stress fibers and is distributed close to the cell membrane and at cell-cell contacts to regulate myosin phosphatase activity. In addition to MYPT1, a novel isoform of MYPT1, MYPT2, also interacts with PPIc. MYPT3, also designated PP16A, inhibits protein phosphatase activity involving phosphorylase, myosin light chain and myosin substrates. It acts as a lipid anchor and binds PP1. MYPT3 localizes primarily to the cell membrane.

REFERENCES

1. Skinner, J.A. and Saltiel, A.R. 2001. Cloning and identification of MYPT3: a prenylatable myosin targetting subunit of protein phosphatase 1. Biochem. J. 356: 257-267.
2. Cao, W., Mattagajasingh, S.N., Xu, H., Kim, K., Fierlbeck, W., Deng, J., Lowenstein, C.J. and Ballermann, B.J. 2002. TIMAP, a novel CAAX box protein regulated by TGF-β1 and expressed in endothelial cells. Am. J. Physiol. Cell. Physiol. 283: C327-337.
3. Ito, M., Nakano, T., Erdodi, F. and Hartshorne, D.J. 2004. Myosin phosphatase: structure, regulation and function. Mol. Cell Biochem. 259:197-209.
4. Vereshchagina, N., Bennett, D., Szoor, B., Kirchner, J., Gross, S., Vissi, E., White-Cooper, H. and Alphey, L. 2004. The essential role of PP1β in *Drosophila* is to regulate nonmuscle myosin. Mol. Biol. Cell 15: 4395-4405.
5. SWISS-PROT/TrEMBL (Q96I34). World Wide Web URL: http://www.expasy.ch/sprot/sprot-top.html

CHROMOSOMAL LOCATION

Genetic locus: PPP1R16A (human) mapping to 8q24.3.

PRODUCT

MYPT3 (h): 293T Lysate represents a lysate of human MYPT3 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

MYPT3 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive MYPT3 antibodies. Recommended use: 10-20 µl 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.