SANTA CRUZ BIOTECHNOLOGY, INC.

MYPT3 (H-47): sc-135165

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.

SOURCE

MYPT3 (H-47) is a rabbit polyclonal antibody raised against amino acids 31-77 mapping near the N-terminus of MYPT3 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

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 or our catalog for detailed protocols and support products.

APPLICATIONS

MYPT3 (H-47) is recommended for detection of MYPT3 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)], 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).

Suitable for use as control antibody for MYPT3 siRNA (h): sc-61130, MYPT3 shRNA Plasmid (h): sc-61130-SH and MYPT3 shRNA (h) Lentiviral Particles: sc-61130-V.

Molecular Weight of MYPT3: 75 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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