

PPAPDC3 (K-17): sc-248297

BACKGROUND

PPAPDC3 (phosphatidic acid phosphatase type 2 domain containing 3), also known as NET39 or probable lipid phosphate phosphatase PPAPDC3, is a 271 amino acid multi-pass membrane protein that belongs to the PA-phosphatase related phosphoesterase family. Localizing to nucleus envelope and endoplasmic reticulum membrane, PPAPDC3 is oriented so that both N- and C-terminals are exposed to cytoplasm/nucleoplasm. Highly expressed in cardiac and skeletal muscle tissues, PPAPDC3 functions as a negative regulator of myoblast differentiation, partly through effects on FRAP signaling. PPAPDC3 controls FRAP-dependent IGF-II expression during differentiation and likely operates as part of the regulatory machinery for myogenesis. PPAPDC3 may also be involved in muscle homeostasis activity. The gene that encodes PPAPDC3 maps to human chromosome 9q34.11.

REFERENCES

1. Chen, I.H., et al. 2006. Nuclear envelope transmembrane proteins (NETs) that are up-regulated during myogenesis. *BMC Cell Biol.* 7: 38.
2. Liu, G.H., et al. 2009. Regulation of myoblast differentiation by the nuclear envelope protein NET39. *Mol. Cell. Biol.* 29: 5800-5812.
3. Port, M., et al. 2009. A gene signature of primary tumor identifies metastasized seminoma. *Urol. Oncol.* 29:764-773
4. Malik, P., et al. 2010. Cell-specific and lamin-dependent targeting of novel transmembrane proteins in the nuclear envelope. *Cell. Mol. Life Sci.* 67: 1353-1369.
5. Miriyala, S., et al. 2010. Functional characterization of the atypical integral membrane lipid phosphatase PDP1/PPAPDC2 identifies a pathway for interconversion of isoprenols and isoprenoid phosphates in mammalian cells. *J. Biol. Chem.* 285: 13918-13929.
6. Chin, L.T., et al. 2010. A proteomics-based translational approach reveals an antifolate resistance inherent in human plasma derived from blood donation. *J. Proteome Res.* 9: 3091-3102.

CHROMOSOMAL LOCATION

Genetic locus: PPAPDC3 (human) mapping to 9q34.13; Ppapdc3 (mouse) mapping to 2 B.

SOURCE

PPAPDC3 (K-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of PPAPDC3 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.

Blocking peptide available for competition studies, sc-248297 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

PPAPDC3 (K-17) is recommended for detection of PPAPDC3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with PPAPDC2.

PPAPDC3 (K-17) is also recommended for detection of PPAPDC3 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for PPAPDC3 siRNA (h): sc-92580, PPAPDC3 siRNA (m): sc-152404, PPAPDC3 shRNA Plasmid (h): sc-92580-SH, PPAPDC3 shRNA Plasmid (m): sc-152404-SH, PPAPDC3 shRNA (h) Lentiviral Particles: sc-92580-V and PPAPDC3 shRNA (m) Lentiviral Particles: sc-152404-V.

Molecular Weight of PPAPDC3: 29 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.