SANTA CRUZ BIOTECHNOLOGY, INC.

PPAPDC3 shRNA Plasmid (m): sc-152404-SH

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 9q34.13.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Ppapdc3 (mouse) mapping to 2 B.

PRODUCT

PPAPDC3 shRNA Plasmid (m) is a pool of 3 target-specific lentiviral vector plasmids each encoding 19-25 nt (plus hairpin) shRNAs designed to knock down gene expression. Each plasmid contains a puromycin resistance gene for the selection of cells stably expressing shRNA. Each vial contains 20 µg of lyophilized shRNA plasmid DNA. Suitable for up to 20 transfections. Also see PPAPDC3 siRNA (m): sc-152404 and PPAPDC3 shRNA (m) Lentiviral Particles: sc-152404-V as alternate gene silencing products.

STORAGE AND RESUSPENSION

Store lyophilized shRNA plasmid DNA at 4° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at 4° C for short term storage or -80° C for long term storage. Avoid repeated freeze thaw cycles.

Resuspend lyophilized shRNA plasmid DNA in 200 µl of the deionized water provided. Resuspension of the shRNA plasmid DNA in 200 µl of deionized water makes a 0.1 µg/µl solution in a 10 mM Tris, 1 mM EDTA buffered solution.

APPLICATIONS

PPAPDC3 shRNA Plasmid (m) is recommended for the inhibition of PPAPDC3 expression in mouse cells.

SUPPORT REAGENTS

For optimal shRNA Plasmid transfection efficiency, Santa Cruz Biotechnology's shRNA Plasmid Transfection Reagent: sc-108061 (0.2 ml) and shRNA Plasmid Transfection Medium: sc-108062 (20 ml) are recommended. Control shRNAs are available as 20 µg lyophilized plasmid DNA. Each encodes a scrambled shRNA sequence that will not lead to the specific degradation of any known cellular mRNA. Control shRNA Plasmids include: sc-108060, sc-108065 and sc-108066.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor PPAPDC3 gene expression knockdown using RT-PCR Primer: PPAPDC3 (m)-PR: sc-152404-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

The purchase of this product conveys to the buyer the nontransferable right to use the purchased amount of the product and all replicates and derivatives for research purposes conducted by the buyer in his laboratory only (whether the buyer is an academic or for-profit entity). The buyer cannot sell or otherwise transfer (a) this product (b) its components or (c) materials made using this product or its components to a third party, or otherwise use this product or its components or materials made using this product or its components for Commercial Purposes.

PROTOCOLS

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