SANTA CRUZ BIOTECHNOLOGY, INC.

DPM3 (C-17): sc-15839

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Biosynthesis of glycosylphosphatidylinositol and N-glycan precursor is dependent upon a mannosyl donor, dolichol phosphate-mannose (DPM). DPM synthase, a transmembrane protein, is associated with membranes of the rough endoplasmic reticulum and catalyzes mannosyl transfer from GDP-mannose hydrophobic long-chain acceptor dolichyl-phosphate. DPM synthase in various organisms are grouped into two types. One type is a single-component enzyme, represented by *Saccharomyces cerevisiae*, and the other is a multicomponent enzyme which is represented by human DPM synthase and consists of three subunits: DPM1, DPM2 and DPM3. DPM1 is not sufficient for DPM synthesis, which requires the 84 amino acid DPM2 protein for localization to the ER and stable expression of DPM1. The third subunit, DPM3, comprises 92 amino acids, and it is associated with DPM1 via its C-terminal domain and with DPM2 via its N-terminal region. The stability of DPM1 is directly dependent upon DPM3, which is stablized by DPM2. DPM synthase activity is associated with an ER phosphoprotein. In addition, a mitochondrial DPM synthase exists, which is located on the cytosolic face of the outer membrane of mitochondria.

REFERENCES

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3. Maeda, Y., Tomita, S., Watanabe, R., Ohishi, K. and Kinoshita, T. 1998. DPM2 regulates biosynthesis of dolichol phosphate-mannose in mammalian cells: correct subcellular localization and stablization of DPM1, and binding of dolichol phosphate. EMBO J. 17: 4920-4929.
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CHROMOSOMAL LOCATION

Genetic locus: DPM3 (human) mapping to 1q22; Dpm3 (mouse) mapping to 3 F1.

SOURCE

DPM3 (C-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of DPM3 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-15839 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

DPM3 (C-17) is recommended for detection of DPM3 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).

DPM3 (C-17) is also recommended for detection of DPM3 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for DPM3 siRNA (h): sc-41513, DPM3 siRNA (m): sc-41514, DPM3 shRNA Plasmid (h): sc-41513-SH, DPM3 shRNA Plasmid (m): sc-41514-SH, DPM3 shRNA (h) Lentiviral Particles: sc-41513-V and DPM3 shRNA (m) Lentiviral Particles: sc-41514-V.

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.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. 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 or our catalog for detailed protocols and support products.