SANTA CRUZ BIOTECHNOLOGY, INC.

DPM1 (I-20): sc-15836

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 (ER) 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 multi-component enzyme, represented by human DPM synthase and consisting 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.

CHROMOSOMAL LOCATION

Genetic Locus: DPM1 (human) mapping to 20q13.13; Dpm1 (mouse) mapping to 2 H3.

SOURCE

DPM1 (I-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of DPM1 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-15836 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

DPM1 (I-20) is recommended for detection of DPM1 of mouse, rat and 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

DPM1 (I-20) is also recommended for detection of DPM1 in additional species, including equine, canine, bovine, porcine and avian.

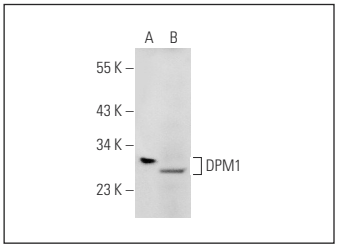
Suitable for use as control antibody for DPM1 siRNA (h): sc-41509, DPM1 siRNA (m): sc-41510, DPM1 shRNA Plasmid (h): sc-41509-SH, DPM1 shRNA Plasmid (m): sc-41510-SH, DPM1 shRNA (h) Lentiviral Particles: sc-41509-V and DPM1 shRNA (m) Lentiviral Particles: sc-41510-V.

Positive Controls: U-87 MG cell lysate: sc-2411 or mouse brain extract: sc-2253.

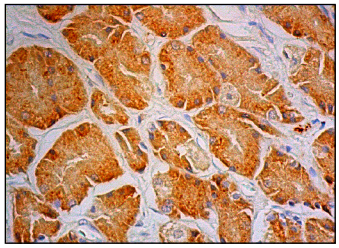
STORAGE

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

DATA



DPM1 (I-20): sc-15836. Western blot analysis of DPM1 expression in U-87 MG whole cell lysate (**A**) and mouse brain tissue extract (**B**).



DPM1 (I-20): sc-15836. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lower stomach tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Mavinakere, M.S., et al. 2004. Dual targeting of the human cytomegalovirus UL37 exon 1 protein during permissive infection. J. Gen. Virol. 85: 323-329.
2. Mavinakere, M.S., et al. 2004. Internal cleavage of the human cytomegalovirus UL37 immediate-early glycoprotein and divergent trafficking of its proteolytic fragments. J. Gen. Virol. 85: 1989-1994.
3. Kihara, A., et al. 2004. Cross talk between sphingolipids and glycerophospholipids in the establishment of plasma membrane asymmetry. Mol. Biol. Cell 15: 4949-4959.
4. Mavinakere, M.S., et al. 2006. Processing of human cytomegalovirus UL37 mutant glycoproteins in the endoplasmic reticulum lumen prior to mitochondrial importation. J. Virol. 80: 6771-6783.
5. Bozidis, P., et al. 2008. Mitochondrial and secretory human cytomegalovirus UL37 proteins traffic into mitochondrion-associated membranes of human cells. J. Virol. 82: 2715-2726.

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.