SANTA CRUZ BIOTECHNOLOGY, INC.

POMT2 (H-52): sc-98909

BACKGROUND

O-mannosylation is an essential protein modification in eukaryotes that is initiated by an evolutionarily conserved family of protein O-mannosyltransferases. POMT2 encodes an integral membrane protein which localizes to the endoplasmic reticulum (ER) and shares significant sequence similarity with a family of protein O-mannosyltransferases of *S. cerevisiae*. The deduced 750 amino acid protein has a seven transmembrane helical structure with a central hydrophilic domain surrounded by five N-terminal and two C-terminal transmembrane regions. Like other known members of its family, POMT2 lacks a characteristic ER-targeting or -retention signal and contains five N-glycosylation sites. POMT2 shares 36% sequence identity with human POMT1 and RNA dot blot analysis reveals highest expression of mouse POMT2 in testis.

REFERENCES

1. Willer, T., et al. 2002. Characterization of POMT2, a novel member of the PMT protein O-mannosyltransferase family specifically localized to the acrosome of mammalian spermatids. Glycobiology 12: 771-783.
2. Akasaka-Manya, K., et al. 2004. Mutations of the POMT1 gene found in patients with Walker-Warburg syndrome lead to a defect of protein O-mannosylation. Biochem. Biophys. Res. Commun. 325: 75-79.
3. Ichimiya, T., et al. 2004. The twisted abdomen phenotype of *Drosophila* POMT1 and POMT2 mutants coincides with their heterophilic protein O-mannosyltransferase activity. J. Biol. Chem. 279: 42638-42647.
4. Manya, H., et al. 2004. Demonstration of mammalian protein O-mannosyltransferase activity: coexpression of POMT1 and POMT2 required for enzymatic activity. Proc. Natl. Acad. Sci. USA 101: 500-505.
5. van Reeuwijk, J., et al. 2005. POMT2 mutations cause α-dystroglycan hypoglycosylation and Walker-Warburg syndrome. J. Med. Genet. 42: 907-912.
6. Manya, H., et al. 2006. Molecular cloning and characterization of rat POMT1 and POMT2. Glycobiology 16: 863-873.
7. Mercuri, E., et al. 2006. POMT2 mutation in a patient with "MEB-like" phenotype. Neuromuscul. Disord. 16: 446-448.

CHROMOSOMAL LOCATION

Genetic locus: POMT2 (human) mapping to 14q24.3.

SOURCE

POMT2 (H-52) is a rabbit polyclonal antibody raised against amino acids 1-52 mapping at the N-terminus of POMT2 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.

APPLICATIONS

POMT2 (H-52) is recommended for detection of POMT2 of human and, to a lesser extent, mouse and rat 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).

Molecular Weight of POMT2: 87 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206.

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.

PROTOCOLS

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