

# POMT2 (G-3): sc-393487

## 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  $\alpha$ -dystroglycan hypoglycosylation and Walker-Warburg syndrome. *J. Med. Genet.* 42: 907-912.

## CHROMOSOMAL LOCATION

Genetic locus: POMT2 (human) mapping to 14q24.3; Pomt2 (mouse) mapping to 12 D2.

## SOURCE

POMT2 (G-3) is a mouse monoclonal antibody raised against amino acids 1-52 mapping at the N-terminus of POMT2 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

POMT2 (G-3) is available conjugated to agarose (sc-393487 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393487 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393487 PE), fluorescein (sc-393487 FITC), Alexa Fluor® 488 (sc-393487 AF488), Alexa Fluor® 546 (sc-393487 AF546), Alexa Fluor® 594 (sc-393487 AF594) or Alexa Fluor® 647 (sc-393487 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393487 AF680) or Alexa Fluor® 790 (sc-393487 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

POMT2 (G-3) is recommended for detection of POMT2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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).

Suitable for use as control antibody for POMT2 siRNA (h): sc-61381, POMT2 siRNA (m): sc-61382, POMT2 shRNA Plasmid (h): sc-61381-SH, POMT2 shRNA Plasmid (m): sc-61382-SH, POMT2 shRNA (h) Lentiviral Particles: sc-61381-V and POMT2 shRNA (m) Lentiviral Particles: sc-61382-V.

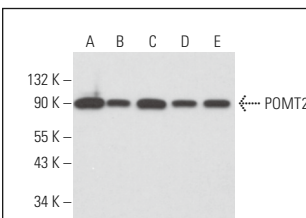
Molecular Weight of POMT2: 87 kDa.

Positive Controls: SK-BR-3 cell lysate: sc-2218, NTERA-2 cl.D1 whole cell lysate: sc-364181 or HeLa whole cell lysate: sc-2200.

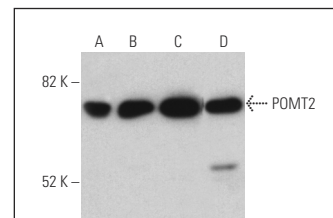
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



POMT2 (G-3): sc-393487. Western blot analysis of POMT2 expression in HeLa (A), SK-BR-3 (B), NTERA-2 cl.D1 (C), RPE-J (D) and C6 (E) whole cell lysates.



POMT2 (G-3): sc-393487. Western blot analysis of POMT2 expression in NTERA-2 cl.D1 (A), Hep G2 (B), HeLa (C) and RPE-J (D) whole cell lysates. Detection reagent used: m-IgG $\kappa$  BP-HRP: sc-525408.

## 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.

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