

TMED2 (A-8): sc-376033



The Power to Question

BACKGROUND

TMED2 (transmembrane emp24 domain trafficking protein 2), also known as P24A or RNP24, is a 201 amino acid protein that is a member of the EMP24/GP25L family. Like most members of this family, TMED2 is a single-pass type I membrane protein containing one GOLD domain. The GOLD (Golgi dynamics) domain is a region of about 90 to 150 amino acids that mediates protein-protein interactions. The GOLD domain interacts with lipid, sterol or fatty acid domains as well as with RUN domains, which interact with cytoskeletal filaments of membrane proteins. TMED2 is thought to inhibit GTPase-activating activity of ARFGAP1 and may have a role in the budding of coatmer-coated and other species of coated vesicles. As part of a complex composed of SURF-4 and TMP21, TMED2 binds to cargo molecules to collect them into budding vesicles.

REFERENCES

- Blum, R., et al. 1996. Tmp21 and p24A, two type I proteins enriched in pancreatic microsomal membranes, are members of a protein family involved in vesicular trafficking. *J. Biol. Chem.* 271: 17183-17189.
- Dominguez, M., et al. 1998. gp25L/emp24/p24 protein family members of the *cis*-Golgi network bind both COP I and II coatmer. *J. Cell Biol.* 140: 751-765.
- Blum, R., et al. 1999. Intracellular localization and *in vivo* trafficking of p24A and p23. *J. Cell Sci.* 112: 537-548.
- Sugasawa, T., et al. 2001. The iodocyanopindolol and SM-11044 binding protein belongs to the TM9SF multispansing membrane protein superfamily. *Gene* 273: 227-237.
- Barr, F.A., et al. 2001. Golgi matrix proteins interact with p24 cargo receptors and aid their efficient retention in the Golgi apparatus. *J. Cell Biol.* 155: 885-891.
- Anantharaman, V., et al. 2002. The GOLD domain, a novel protein module involved in Golgi function and secretion. *Genome Biol.* 3: research0023.

CHROMOSOMAL LOCATION

Genetic locus: TMED2 (human) mapping to 12q24.31; Tmed2 (mouse) mapping to 5 F.

SOURCE

TMED2 (A-8) is a mouse monoclonal antibody raised against amino acids 94-201 mapping at the C-terminus of TMED2 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain 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

TMED2 (A-8) is recommended for detection of TMED2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

TMED2 (A-8) is also recommended for detection of TMED2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for TMED2 siRNA (h): sc-95717, TMED2 siRNA (m): sc-154332, TMED2 shRNA Plasmid (h): sc-95717-SH, TMED2 shRNA Plasmid (m): sc-154332-SH, TMED2 shRNA (h) Lentiviral Particles: sc-95717-V and TMED2 shRNA (m) Lentiviral Particles: sc-154332-V.

Molecular Weight (predicted) of TMED2: 23 kDa.

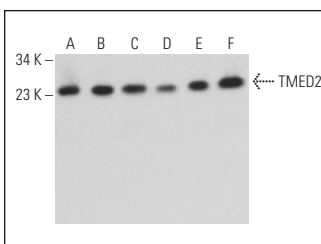
Molecular Weight (observed) of TMED2: 21 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, Hep G2 cell lysate: sc-2227 or NAMALWA cell lysate: sc-2234.

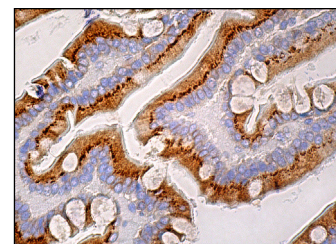
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



TMED2 (A-8): sc-376033. Western blot analysis of TMED2 expression in Hep G2 (A), NIH/3T3 (B), MDA-MB-231 (C), 3T3-L1 (D), NAMALWA (E) and NCI-H460 (F) whole cell lysates.



TMED2 (A-8): sc-376033. Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing cytoplasmic staining of glandular cells.

RESEARCH USE

For research use only, not for use in diagnostic procedures.