

TMED2 (E-12): sc-376458

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 coatamer-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 coatamer. *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 multispinning membrane protein superfamily. *Gene* 273: 227-237.

CHROMOSOMAL LOCATION

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

SOURCE

TMED2 (E-12) 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 IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TMED2 (E-12) is available conjugated to agarose (sc-376458 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376458 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376458 PE), fluorescein (sc-376458 FITC), Alexa Fluor® 488 (sc-376458 AF488), Alexa Fluor® 546 (sc-376458 AF546), Alexa Fluor® 594 (sc-376458 AF594) or Alexa Fluor® 647 (sc-376458 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376458 AF680) or Alexa Fluor® 790 (sc-376458 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

TMED2 (E-12) 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 (E-12) is also recommended for detection of TMED2 in additional species, including equine, canine, bovine, porcine and avian.

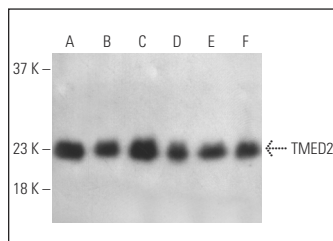
Suitable for use as control antibody for TMED2 siRNA (h): sc-95717, TMED2 siRNA (m): sc-154332, TMED2 shRNA Plasmid (h): sc-95717-SH, TMED2 shRNA Plasmid (m): sc-154332-SH, TMED2 shRNA (h) Lentiviral Particles: sc-95717-V and TMED2 shRNA (m) Lentiviral Particles: sc-154332-V.

Molecular Weight (predicted) of TMED2: 23 kDa.

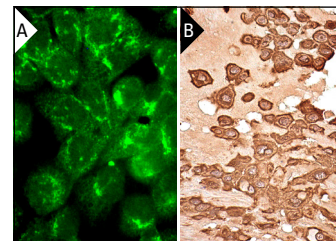
Molecular Weight (observed) of TMED2: 21 kDa.

Positive Controls: Ramos cell lysate: sc-2216, NIH/3T3 whole cell lysate: sc-2210 or RT-4 whole cell lysate: sc-364257.

DATA



TMED2 (E-12) HRP: sc-376458 HRP. Direct western blot analysis of TMED2 expression in NIH/3T3 (A), MDA-MB-231 (B), RT-4 (C), 3T3-L1 (D), Ramos (E) and PC-12 (F) whole cell lysates.



TMED2 (E-12): sc-376458. Immunofluorescence staining of formalin-fixed A-431 cells showing Golgi apparatus localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic and membrane staining of decidual cells (B).

SELECT PRODUCT CITATIONS

- Beier, L. and Fritzsche, R. 1985. Enteropeptidase activities of peroral small intestinal biopsy material in children. *Z. Med. Lab. Diagn.* 26: 254-260.
- Chang, S.J., et al. 2019. Unique features in the intracellular transport of typhoid toxin revealed by a genome-wide screen. *PLoS Pathog.* 15: e1007704.
- Del Olmo, T., et al. 2019. RAB21 interacts with TMED10 and modulates its localization and abundance. *Biol. Open* 8: bio045336.
- Motani, K., et al. 2022. The Golgi-resident protein ACBD3 concentrates STING at ER-Golgi contact sites to drive export from the ER. *Cell Rep.* 41: 111868.

RESEARCH USE

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

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