

TMED2 (C-8): sc-376459

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.

CHROMOSOMAL LOCATION

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

SOURCE

TMED2 (C-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 IgG_{2b} 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 (C-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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

TMED2 (C-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.

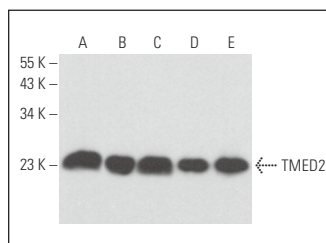
Molecular Weight (observed) of TMED2: 21 kDa.

Positive Controls: RT-4 whole cell lysate: sc-364257, NIH/3T3 whole cell lysate: sc-2210 or Raji whole cell lysate: sc-364236.

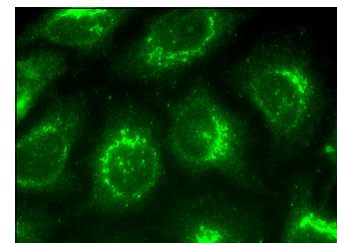
RECOMMENDED SUPPORT REAGENTS

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.

DATA



TMED2 (C-8): sc-376459. Western blot analysis of TMED2 expression in Raji (A), NIH/3T3 (B), MDA-MB-231 (C), 3T3-L1 (D) and RT-4 (E) whole cell lysates.



TMED2 (C-8): sc-376459. Immunofluorescence staining of methanol-fixed HeLa cells showing Golgi apparatus localization.

SELECT PRODUCT CITATIONS

- Zhang, X., et al. 2019. Regulation of global gene expression in brain by TMP21. *Mol. Brain* 12: 39.
- Maurel, M., et al. 2019. Control of anterior GRadiant 2 (AGR2) dimerization links endoplasmic reticulum proteostasis to inflammation. *EMBO Mol. Med.* 11: e10120.
- Di Minin, G., et al. 2022. TMED2 binding restricts SMO to the ER and Golgi compartments. *PLoS Biol.* 20: e3001596.
- Anwar, M.U., et al. 2022. ER-Golgi-localized proteins TMED2 and TMED10 control the formation of plasma membrane lipid nanodomains. *Dev. Cell* 57: 2334-2346.e8.

RESEARCH USE

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

PROTOCOLS

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