

# TMP21 (A-7): sc-137003

## BACKGROUND

TMP21 (21 kDa transmembrane-trafficking protein), also known as TMED10 (transmembrane emp24 domain-containing protein 10), Tmp-21, S311125, S3111125, p23 or p24b, is a member of the EMP24/GP25L/p24 cargo family of proteins that regulates vesicular trafficking in the early secretory pathway. TMP21 is a ubiquitously expressed single-pass type I membrane protein localizing to the Golgi cisternae and the plasma membrane. It contains one GOLD (Golgi dynamics) domain and participates in protein transport and quality control between the endoplasmic reticulum (ER) and the Golgi complex. In addition, TMP21 is a component of the heteromeric secretase complex (or presenilin complex) and functions to regulate the  $\gamma$ -secretase activity. Two isoforms, namely TMP21-I and TMP21-II, exist for this protein.

## CHROMOSOMAL LOCATION

Genetic locus: TMED10 (human) mapping to 14q24.3; Tmed10 (mouse) mapping to 12 D2.

## SOURCE

TMP21 (A-7) is a mouse monoclonal antibody raised against amino acids 41-105 mapping near the N-terminus of TMP21 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TMP21 (A-7) is available conjugated to agarose (sc-137003 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-137003 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-137003 PE), fluorescein (sc-137003 FITC), Alexa Fluor® 488 (sc-137003 AF488), Alexa Fluor® 546 (sc-137003 AF546), Alexa Fluor® 594 (sc-137003 AF594) or Alexa Fluor® 647 (sc-137003 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-137003 AF680) or Alexa Fluor® 790 (sc-137003 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

TMP21 (A-7) is recommended for detection of TMP21 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), 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).

Suitable for use as control antibody for TMP21 siRNA (h): sc-63135, TMP21 siRNA (m): sc-63136, TMP21 shRNA Plasmid (h): sc-63135-SH, TMP21 shRNA Plasmid (m): sc-63136-SH, TMP21 shRNA (h) Lentiviral Particles: sc-63135-V and TMP21 shRNA (m) Lentiviral Particles: sc-63136-V.

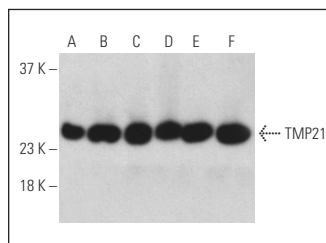
Molecular Weight of TMP21: 26 kDa.

Positive Controls: Raji whole cell lysate: sc-364236, Hep G2 cell lysate: sc-2227 or HeLa whole cell lysate: sc-2200.

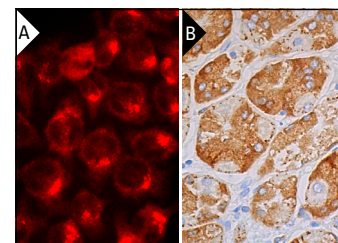
## RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgG $\kappa$  BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



TMP21 (A-7) HRP: sc-137003 HRP. Direct western blot analysis of TMP21 expression in Jurkat (A), Raji (B), 293T (C), HeLa (D), K-562 (E) and Hep G2 (F) whole cell lysates.



TMP21 (A-7): sc-137003. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human stomach tissue showing cytoplasmic staining of glandular cells. Blocked with 0.25X UltraCruz® Blocking Reagent: sc-516214. Detection reagents used: m-IgG $\kappa$  BP-B: sc-516142 and ImmunoCruz® ABC Kit: sc-516216 (B).

## SELECT PRODUCT CITATIONS

- Li, C., et al. 2019. Proteasome inhibition activates autophagy-lysosome pathway associated with TFEB dephosphorylation and nuclear translocation. *Front. Cell Dev. Biol.* 7: 170.
- Luteijn, R.D., et al. 2019. A genome-wide haploid genetic screen identifies heparan sulfate-associated genes and the macropinocytosis modulator TMED10 as factors supporting vaccinia virus infection. *J. Virol.* 93: e02160-18.
- Di Minin, G., et al. 2022. TMED2 binding restricts SMO to the ER and Golgi compartments. *PLoS Biol.* 20: e3001596.
- Wang, S., et al. 2022. KIF3B promotes a PI3K signaling gradient causing changes in a Shh protein gradient and suppressing polydactyly in mice. *Dev. Cell* 57: 2273-2289.e11.

## 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.