

# TMED10 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP19254b

## Product Information

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<b>Application</b>	WB, E
<b>Primary Accession</b>	<a href="#">P49755</a>
<b>Other Accession</b>	<a href="#">Q63584</a> , <a href="#">Q28735</a> , <a href="#">Q9D1D4</a> , <a href="#">Q5E971</a> , <a href="#">NP_006818.3</a>
<b>Reactivity</b>	Human, Rat, Mouse
<b>Predicted</b>	Bovine, Mouse, Rabbit, Rat
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	Rabbit IgG
<b>Clone Names</b>	RB40979
<b>Calculated MW</b>	24976
<b>Antigen Region</b>	156-185

## Additional Information

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<b>Gene ID</b>	10972
<b>Other Names</b>	Transmembrane emp24 domain-containing protein 10, 21 kDa transmembrane-trafficking protein, S31III125, S31I125, Tmp-21-I, Transmembrane protein Tmp21, p23, p24 family protein delta-1, p24delta1, p24delta, TMED10, TMP21
<b>Target/Specificity</b>	This TMED10 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 156-185 amino acids from the C-terminal region of human TMED10.
<b>Dilution</b>	WB~~1:1000 E~~Use at an assay dependent concentration.
<b>Format</b>	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
<b>Storage</b>	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
<b>Precautions</b>	TMED10 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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<b>Name</b>	TMED10 ( <a href="#">HGNC:16998</a> )
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## Synonyms

TMP21

## Function

Cargo receptor involved in protein vesicular trafficking and quality control in the endoplasmic reticulum (ER) and Golgi (PubMed:[10052452](#), PubMed:[11726511](#), PubMed:[16641999](#), PubMed:[17288597](#), PubMed:[19296914](#), PubMed:[20427317](#), PubMed:[21219331](#), PubMed:[27569046](#)). The p24 protein family is a group of transmembrane proteins that bind coat protein complex I/COPI and coat protein complex II/COPII involved in vesicular trafficking between the membranes (PubMed:[10052452](#)). Acts at the luminal side for incorporation of secretory cargo molecules into transport vesicles and involved in vesicle coat formation at the cytoplasmic side (PubMed:[20427317](#), PubMed:[27569046](#)). Mainly functions in the early secretory pathway and cycles between the ER, ER-Golgi intermediate compartment (ERGIC) and Golgi, mediating cargo transport through COPI and COPII-coated vesicles (PubMed:[10052452](#), PubMed:[10852829](#), PubMed:[12237308](#)). In COPII vesicle-mediated anterograde transport, involved in the transport of GPI-anchored proteins by acting together with TMED2 as their cargo receptor; the function specifically implies SEC24C and SEC24D of the COPII vesicle coat and lipid raft-like microdomains of the ER (PubMed:[20427317](#), PubMed:[27569046](#)). Recognizes GPI anchors structural remodeled in the ER by the GPI inositol-deacylase/PGAP1 and the metallophosphoesterase MPPE1/PGAP5 (By similarity). In COPI vesicle-mediated retrograde transport, involved in the biogenesis of COPI vesicles and vesicle coat recruitment (PubMed:[11726511](#)). Involved in trafficking of amyloid beta A4 protein and soluble APP-beta release (independent from the modulation of gamma-secretase activity) (PubMed:[17288597](#)). Involved in the KDELR2-mediated retrograde transport of the toxin A subunit (CTX-A- K63) together with COPI and the COOH terminus of KDELR2 (By similarity). On Golgi membranes, acts as a primary receptor for ARF1-GDP, a GTP- binding protein involved in COPI-vesicle formation (PubMed:[11726511](#)). Increases coatomer-dependent GTPase-activating activity of ARFGAP2 which mediates the hydrolysis of ARF1-bound GTP and therefore modulates protein trafficking from the Golgi apparatus (PubMed:[19296914](#)). Involved in the exocytic trafficking of G protein-coupled receptors F2LR1/PAR2 (trypsin and trypsin-like enzyme receptor), OPRM1 (opioid receptor) and P2RY4 (UTD and UDP receptor) from the Golgi to the plasma membrane, thus contributing to receptor resensitization (PubMed:[21219331](#)). In addition to its cargo receptor activity, may also act as a protein channel after oligomerization, facilitating the post- translational entry of leaderless cytoplasmic cargo into the ERGIC (PubMed:[32272059](#)). Involved in the translocation into ERGIC, the vesicle entry and the secretion of leaderless cargos (lacking the secretion signal sequence), including the mature form of interleukin 1/IL-1 family members, the alpha-crystallin B chain HSPB5, the carbohydrate-binding proteins galectin-1/LGALS1 and galectin-3/LGALS3, the microtubule-associated protein Tau/MAPT, and the annexin A1/ANXA1; the translocation process is dependent on cargo protein unfolding and enhanced by chaperones HSP90AB1 and HSP90B1/GRP9 (PubMed:[32272059](#)). Could also associates with the presenilin-dependent gamma-secretase complex in order to regulate gamma-cleavages of the amyloid beta A4 protein to yield amyloid-beta 40/Abeta40 (PubMed:[16641999](#)).

## Cellular Location

Endoplasmic reticulum membrane; Single-pass type I membrane protein. Endoplasmic reticulum-Golgi intermediate compartment membrane; Single-pass type I membrane protein. Golgi apparatus membrane; Single-pass type I membrane protein. Golgi apparatus, cis-Golgi network membrane; Single-pass type I membrane protein. Golgi apparatus, trans-Golgi network membrane {ECO:0000250|UniProtKB:Q63584}; Single-pass type I membrane protein. Cytoplasmic vesicle, secretory vesicle membrane; Single-pass type I membrane protein. Cell membrane {ECO:0000250|UniProtKB:Q63584};

Single-pass type I membrane protein. Melanosome Note=Identified by mass spectrometry in melanosome fractions from stage I to stage IV.

## Background

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This gene is a member of the EMP24/GP25L/p24 family and encodes a protein with a GOLD domain. This type I membrane protein is localized to the plasma membrane and golgi cisternae and is involved in vesicular protein trafficking. The protein is also a member of a heteromeric secretase complex and regulates the complex's gamma-secretase activity without affecting its epsilon-secretase activity. Mutations in this gene have been associated with early-onset familial Alzheimer's disease. This gene has a pseudogene on chromosome 8.

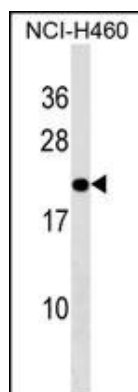
## References

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Zhao, J., et al. BMC Med. Genet. 11, 96 (2010) :  
Pardossi-Piquard, R., et al. J. Biol. Chem. 284(42):28634-28641(2009)  
Soranzo, N., et al. PLoS Genet. 5 (4), E1000445 (2009) :  
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## Images

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TMED10 Antibody (C-term) (Cat. #AP19254b) western blot analysis in NCI-H460 cell line lysates (35ug/lane). This demonstrates the TMED10 antibody detected the TMED10 protein (arrow).

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