

**TMED10 / TMP21 Antibody (Internal)**  
**Rabbit Polyclonal Antibody**  
**Catalog # ALS11729****Specification****TMED10 / TMP21 Antibody (Internal) - Product Information**

Application	IHC
Primary Accession	<a href="#">P49755</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	25kDa KDa

**TMED10 / TMP21 Antibody (Internal) - Additional Information****Gene ID** 10972**Other Names**

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

**Target/Specificity**

18 amino acid peptide from near the center of human TMP21.

**Reconstitution & Storage**

Short term 4°C, long term aliquot and store at -20°C, avoid freeze thaw cycles. Store undiluted.

**Precautions**

TMED10 / TMP21 Antibody (Internal) is for research use only and not for use in diagnostic or therapeutic procedures.

**TMED10 / TMP21 Antibody (Internal) - Protein Information****Name** TMED10 ([HGNC:16998](#))**Synonyms** TMP21**Function**

Cargo receptor involved in protein vesicular trafficking and quality control in the endoplasmic reticulum (ER) and Golgi (PubMed: [10052452](http://www.uniprot.org/citations/10052452) target="\_blank">10052452</a>, PubMed: [11726511](http://www.uniprot.org/citations/11726511) target="\_blank">11726511</a>, PubMed: [16641999](http://www.uniprot.org/citations/16641999) target="\_blank">16641999</a>, PubMed: [17288597](http://www.uniprot.org/citations/17288597) target="\_blank">17288597</a>, PubMed: [19296914](http://www.uniprot.org/citations/19296914) target="\_blank">19296914</a>, PubMed: [20427317](http://www.uniprot.org/citations/20427317) target="\_blank">20427317</a>, PubMed: [21219331](http://www.uniprot.org/citations/21219331) target="\_blank">21219331</a>, PubMed: [27569046](http://www.uniprot.org/citations/27569046)

target="\_blank">27569046</a>). 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:<a href="http://www.uniprot.org/citations/10052452" target="\_blank">10052452</a>). 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:<a href="http://www.uniprot.org/citations/20427317" target="\_blank">20427317</a>, PubMed:<a href="http://www.uniprot.org/citations/27569046" target="\_blank">27569046</a>). 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:<a href="http://www.uniprot.org/citations/10052452" target="\_blank">10052452</a>, PubMed:<a href="http://www.uniprot.org/citations/10852829" target="\_blank">10852829</a>, PubMed:<a href="http://www.uniprot.org/citations/12237308" target="\_blank">12237308</a>). 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:<a href="http://www.uniprot.org/citations/20427317" target="\_blank">20427317</a>, PubMed:<a href="http://www.uniprot.org/citations/27569046" target="\_blank">27569046</a>). 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:<a href="http://www.uniprot.org/citations/11726511" target="\_blank">11726511</a>). Involved in trafficking of amyloid beta A4 protein and soluble APP-beta release (independent from the modulation of gamma-secretase activity) (PubMed:<a href="http://www.uniprot.org/citations/17288597" target="\_blank">17288597</a>). 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:<a href="http://www.uniprot.org/citations/11726511" target="\_blank">11726511</a>). 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:<a href="http://www.uniprot.org/citations/19296914" target="\_blank">19296914</a>). 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:<a href="http://www.uniprot.org/citations/21219331" target="\_blank">21219331</a>). 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:<a href="http://www.uniprot.org/citations/32272059" target="\_blank">32272059</a>). 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:<a href="http://www.uniprot.org/citations/32272059" target="\_blank">32272059</a>). 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:<a href="http://www.uniprot.org/citations/16641999" target="\_blank">16641999</a>).

### 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

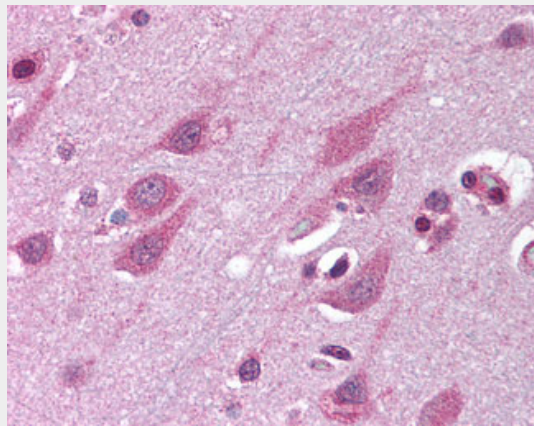
{ECO:0000250|UniProtKB:Q63584}; Single-pass type I membrane protein. Melanosome  
Note=Identified by mass spectrometry in melanosome fractions from stage I to stage IV.

### **TMED10 / TMP21 Antibody (Internal) - Protocols**

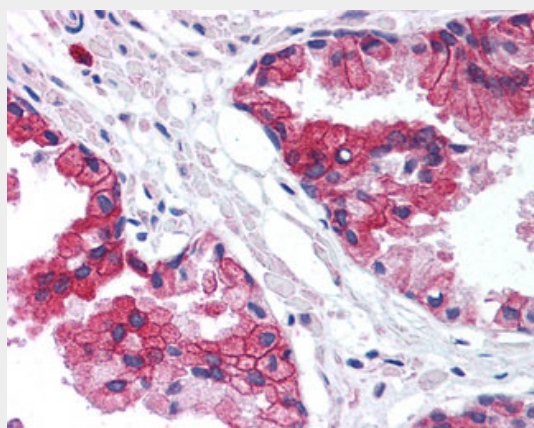
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### **TMED10 / TMP21 Antibody (Internal) - Images**



Anti-TMED10 / TMP21 antibody IHC of human brain, cortex.



Anti-TMED10 / TMP21 antibody IHC of human prostate.

### **TMED10 / TMP21 Antibody (Internal) - Background**

Involved in vesicular protein trafficking. Mainly functions in the early secretory pathway. Thought to act as cargo receptor at the luminal side for incorporation of secretory cargo molecules into transport vesicles and to be involved in vesicle coat formation at the cytoplasmic side. In COPII

vesicle-mediated anterograde transport involved in the transport of GPI-anchored proteins and proposed to act 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. Recognizes GPI anchors structural remodeled in the ER by PGAP1 and MPPE1 (By similarity). In COPI vesicle-mediated retrograde transport involved in the biogenesis of COPI vesicles and vesicle coat recruitment. On Golgi membranes, acts as primary receptor for ARF1-GDP which is involved in COPI-vesicle formation. Increases coatomer-dependent GTPase-activating activity of ARFGAP2. Involved in trafficking of G protein-coupled receptors (GPCRs). Regulates F2LR1, OPRM1 and P2RY4 exocytic trafficking from the Golgi to the plasma membrane thus contributing to receptor resensitization. Involved in trafficking of amyloid beta A4 protein and soluble APP-beta release (independent of modulation of gamma-secretase activity). As part of the presenilin-dependent gamma-secretase complex regulates gamma-cleavages of the amyloid beta A4 protein to yield amyloid-beta 40 (Abeta40). Involved in organization of the Golgi apparatus.

#### **TMED10 / TMP21 Antibody (Internal) - References**

- Blum R.,et al.J. Biol. Chem. 271:17183-17189(1996).  
Sanseau P.,et al.Submitted (JUL-1996) to the EMBL/GenBank/DDBJ databases.  
Sherrington R.,et al.Nature 375:754-760(1995).  
Hoerer J.,et al.DNA Seq. 10:121-126(1999).  
Li W.B.,et al.Submitted (FEB-2003) to the EMBL/GenBank/DDBJ databases.