



TMP21 Mouse mAb

Catalog No	YP-mAb-19266
Isotype	IgG
Reactivity	Human;Mouse;Rat
Applications	WB
Gene Name	TMED10 TMP21
Immunogen	Synthesized peptide derived from human TMP21
Specificity	This antibody detects endogenous levels of TMP21 at Human, Mouse,Rat
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Source	Monoclonal,Mouse,IgG
Purification	The antibody was affinity-purified from mouse antiserum by affinity-chromatography using epitope-specific immunogen.
Dilution	WB 1:500-2000
Concentration	1 mg/ml
Purity	≥90%
Storage Stability	-20°C/1 year
Synonyms	TMED10;21 kDa transmembrane-trafficking protein;p23;p24 family protein delta-1;p24delta1;TMED10 TMP21;Transmembrane emp24 domain-containing protein 10 (21 kDa transmembrane-trafficking protein) (S3111125) (S311125) (Tmp-21-I) (Transmembrane protein Tmp21) (p23) (p24 family protein delta-1) (p24delta1) (p24delta)
Observed Band	21 kDa
Calculated Molecular Weight	25 kDa
Cell Pathway	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 ; Single-pass type I membrane protein . Cytoplasmic vesicle, secretory vesicle membrane ; Single-pass type I membrane protein . Cell membrane ; Single-pass type I membrane protein . Melanosome . Identified by mass spectrometry in melanosome fractions from stage I to stage IV. .
Tissue Specificity	



Function

Cargo receptor involved in protein vesicular trafficking and quality control in the endoplasmic reticulum (ER) and Golgi . The p24 protein family is a group of transmembrane proteins that bind coat protein complex I/COP1 and coat protein complex II/COP2 involved in vesicular trafficking between the membranes . Acts at the luminal side for incorporation of secretory cargo molecules into transport vesicles and involved in vesicle coat formation at the cytoplasmic side . Mainly functions in the early secretory pathway and cycles between the ER, ER-Golgi intermediate compartment (ERGIC) and Golgi, mediating cargo transport through COP1 and COP2-coated vesicles . In COP2 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 COP2 vesicle coat and lipid raft-like microdomains of the ER . Recognizes GPI anchors structural remodeled in the ER by the GPI inositol-deacylase/PGAP1 and the metallophosphoesterase MPPE1/PGAP5 (By similarity). In COP1 vesicle-mediated retrograde transport, involved in the biogenesis of COP1 vesicles and vesicle coat recruitment . Involved in trafficking of amyloid beta A4 protein and soluble APP-beta release (independent from the modulation of gamma-secretase activity) . Involved in the KDELR2-mediated retrograde transport of the toxin A subunit (CTX-A-K63) together with COP1 and the COOH terminus of KDELR2 (By similarity). On Golgi membranes, acts as primary receptor for ARF1-GDP, a GTP-binding protein involved in COP1-vesicle formation . 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 . 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 . 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 . 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 . 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 .

Background

matters needing attention

Avoid repeated freezing and thawing!

Usage suggestions

This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.

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