abcam

Product datasheet

Anti-TMP21 antibody [EPR9036(B)] ab134948

KO VALIDATED Recombinant RabMAb

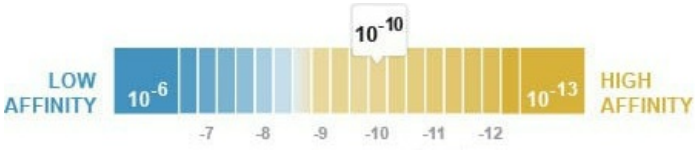
1 References 6 Images

Overview

Product name	Anti-TMP21 antibody [EPR9036(B)]
Description	Rabbit monoclonal [EPR9036(B)] to TMP21
Host species	Rabbit
Tested applications	**Suitable for:** WB, IHC-P **Unsuitable for:** Flow Cyt,ICC/IF or IP
Species reactivity	**Reacts with:** Human **Predicted to work with:** Mouse, Rat
Immunogen	Synthetic peptide within Human TMP21 aa 1-100. The exact sequence is proprietary.
Positive control	IHC-P: Human testis and papillary adenocarcinoma of Human thyroid gland tissues. WB: HeLa, U-87 MG, Raji and 293T cell lysates.
General notes	This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at -20ºC.
Dissociation constant (K_D)	K_D = 8.40 x 10^{-10} M



Learn more about K_D

Storage buffer	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: 9% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA, 50% Tissue culture supernatant
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR9036(B)
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab134948 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/1000 - 1/10000. Predicted molecular weight: 25 kDa.
IHC-P		1/100 - 1/250. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

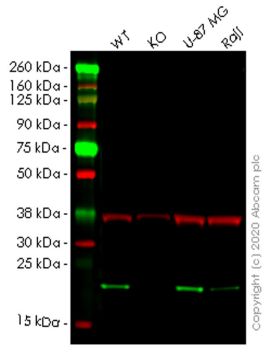
Application notes Is unsuitable for Flow Cyt,ICC/IF or IP.

Target

Function	Involved in vesicular protein trafficking. Mainly functions in the early secretory pathway. Thought to act as cargo receptor at the lumenal 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 togther 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.
Tissue specificity	Ubiquitous.
Sequence similarities	Belongs to the EMP24/GP25L family. Contains 1 GOLD domain.
Domain	The lumenal domain mediates localization to the plasma membrane by partially overriding the ER retention by the cytoplasmic domain.
Cellular localization	Golgi apparatus > cis-Golgi network membrane. Melanosome. Endoplasmic reticulum

membrane. Endoplasmic reticulum-Golgi intermediate compartment membrane. Cytoplasmic vesicle > secretory vesicle membrane. Cell membrane. Golgi apparatus > trans-Golgi network membrane. Identified by mass spectrometry in melanosome fractions from stage I to stage IV. Cycles between compartments of the early secretatory pathway.

Images



Western blot - Anti-TMP21 antibody [EPR9036(B)] (ab134948)

All lanes : Anti-TMP21 antibody [EPR9036(B)] (ab134948) at 1/1000 dilution

Lane 1 : Wild-type HEK293T cell lysate
Lane 2 : TMED10 knockout HEK293T cell lysate
Lane 3 : U-87 MG cell lysate
Lane 4 : Raji cell lysate

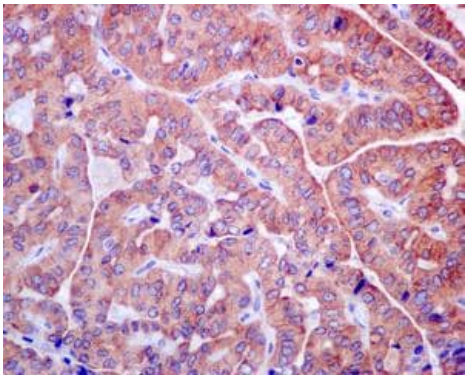
Lysates/proteins at 20 µg per lane.

Secondary
All lanes : Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (**ab216773**) at 1/10000 dilution

Predicted band size: 25 kDa
Observed band size: 19 kDa

Lanes 1-4: Merged signal (red and green). Green - ab134948 observed at 19 kDa. Red - loading control **ab8245** observed at 36 kDa.

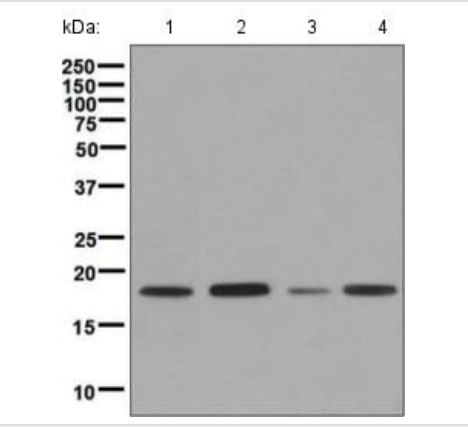
ab134948 Anti-TMP21 antibody [EPR9036(B)] was shown to specifically react with TMP21 in wild-type HEK293T cells. Loss of signal was observed when knockout cell line **ab266227** (knockout cell lysate **ab258233**) was used. Wild-type and TMP21 knockout samples were subjected to SDS-PAGE. ab134948 and Anti-GAPDH antibody [6C5] - Loading Control (**ab8245**) were incubated at room temperature for 2.5 hours at 1 in 1000 dilution and 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (**ab216776**) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TMP21 antibody [EPR9036(B)] (ab134948)

Immunohistochemical analysis of paraffin-embedded papillary adenocarcinoma of Human thyroid gland tissue labelling TMP21 with ab134948 at 1/100 dilution.

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Western blot - Anti-TMP21 antibody [EPR9036(B)] (ab134948)

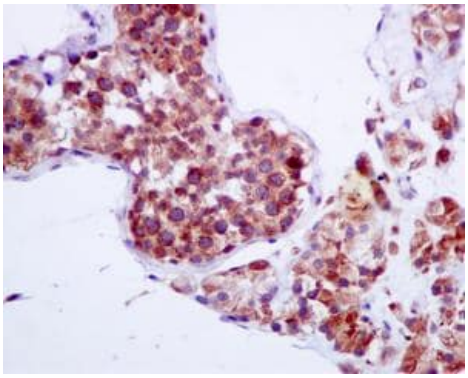
All lanes : Anti-TMP21 antibody [EPR9036(B)] (ab134948) at 1/1000 dilution

Lane 1 : HeLa cell lysate
Lane 2 : U-87 MG cell lysate
Lane 3 : Raji cell lysate
Lane 4 : 293T cell lysate

Lysates/proteins at 10 µg per lane.

Secondary
All lanes : HRP labelled goat anti-rabbit at 1/2000 dilution

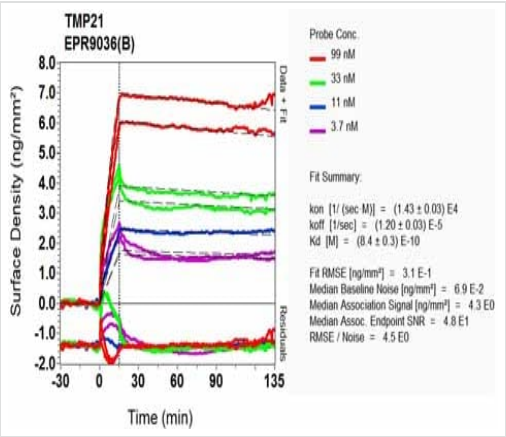
Predicted band size: 25 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TMP21 antibody [EPR9036(B)] (ab134948)

Immunohistochemical analysis of paraffin-embedded Human testis tissue labelling TMP21 with ab134948 at 1/100 dilution.

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



OI-RD Scanning - Anti-TMP21 antibody [EPR9036(B)] (ab134948)

Equilibrium disassociation constant (K_D)

Learn more about K_D

Click here to learn more about K_D

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