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TMEM97 Antibody (N-term)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP21745a

Specification

TMEM97 Antibody (N-term) - Product Information

Application	**WB,E**
Primary Accession	Q5BJF2
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**polyclonal**
Isotype	**Rabbit IgG**

TMEM97 Antibody (N-term) - Additional Information

Gene ID 27346

Other Names
Transmembrane protein 97, Protein MAC30, TMEM97, MAC30

Target/Specificity
This TMEM97 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 22-56 amino acids from the N-terminal region of human TMEM97.

Dilution
WB~~1:2000
E~~Use at an assay dependent concentration.

Format
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.

Storage
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.

Precautions
TMEM97 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

TMEM97 Antibody (N-term) - Protein Information

Name TMEM97 (HGNC:28106)

Function Sigma-2 receptor which contributes to ameliorate dysfunctional cellular processes and slow degenerative progression by regulating cell functions including cholesterol biosynthesis/trafficking, membrane trafficking, autophagy, lipid membrane-bound protein trafficking, and receptor stabilization at the cell surface (Probable) (PubMed:19583955,

PubMed:23922215, PubMed:25620095, PubMed:27378690, PubMed:28559337, PubMed:30443021, PubMed:34233061, PubMed:34799735, PubMed:35970844). Forms a ternary complex with PGRMC1 receptor and low density lipoprotein receptor/LDLR at the plasma membrane, which increases LDLR-mediated LDL cholesterol internalization (PubMed:30443021). Decreases lysosomal sterol transporter NPC1 availability to the cell, probably through NPC1-binding, hence controlling lipid transport, including cholesterol and LBPA, outside of late endosome/lysosome (PubMed:19583955, PubMed:27378690). Binds regio- and stereoselective ligand 20(S)- hydroxycholesterol (20(S)-OHC) which enhances TMEM97-NPC1 interaction and decreases TMEM97-PGRMC1 and TMEM97-TSPO interactions, thereby linking OHC binding to cholesterol homeostasis (PubMed:34799735, PubMed:37047353). Also able to bind cholesterol (By similarity). Binds histatin 1 (Hst 1)/HN1 salivary peptide at the ER membrane, which is critical for increasing mitochondria-ER contacts and stimulating Hst1 wound healing properties (PubMed:34233061, PubMed:35970844). May alter the activity of some cytochrome P450 proteins (PubMed:22292588). Although shows homologies with sterol isomerases (EXPERA domain), not able to catalyze sterol isomerization (Probable) (PubMed:34880501). However, may act as sensors of these molecules (Probable) (PubMed:34880501). Acts as a quality control factor in the ER, promoting the proteolytic degradation of nonproductive and extramitochondrial precursor proteins in the ER membrane thus removing them from the ER surface (By similarity).

Cellular Location
Rough endoplasmic reticulum membrane; Multi-pass membrane protein. Nucleus membrane; Multi- pass membrane protein. Note=Localized at cell membrane and in lysosomes in sterol-depleted cells when expression of endogenous TMEM97 is stimulated (PubMed:19583955). Localized at cell membrane, probably in lipid rafts, in serum-starved conditions (PubMed:30443021)

Tissue Location
Widely expressed in normal tissues. Expressed in pancreatic, renal, breast, colon, ovarian surface epithelial (OSE) cells. Highly expressed in various proliferating cancer cells (PubMed:23922215).

TMEM97 Antibody (N-term) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

TMEM97 Antibody (N-term) - Images

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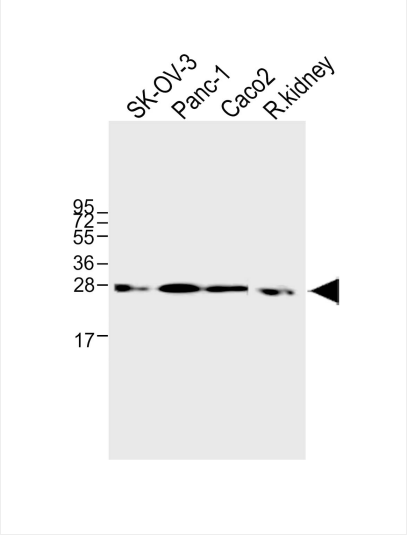
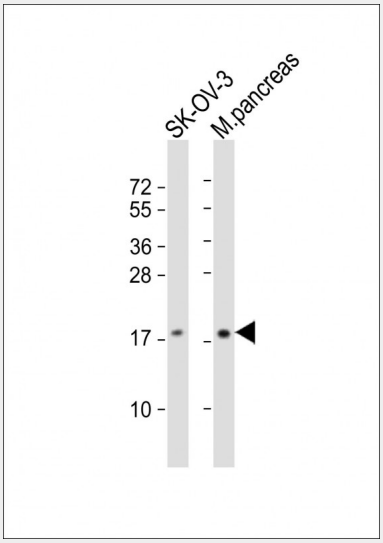


All lanes : Anti-TMEM97 Antibody (N-term) at 1:1000 dilution Lane 1: SK-OV-3 whole cell lysate Lane 2: Panc-1 whole cell lysate Lane 3: Caco2 whole cell lysate Lane 4: rat kidney lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 25 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



All lanes : Anti-TMEM97 Antibody (N-term) at 1:8000 dilution Lane 1: SK-OV-3 whole cell lysate Lane 2: mouse pancreas lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 21 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

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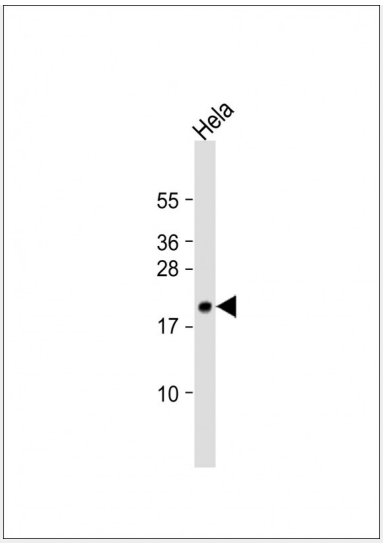

Anti-TMEM97 Antibody (N-term) at 1:2000 dilution + Hela whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 21 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

TMEM97 Antibody (N-term) - Background

Plays a role as a regulator of cellular cholesterol homeostasis.

TMEM97 Antibody (N-term) - References

Murphy M.,et al.Cell Growth Differ. 4:715-722(1993).
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Kayed H.,et al.Histol. Histopathol. 19:1021-1031(2004).
Wilcox C.B.,et al.BMC Cancer 7:223-223(2007).
Bartz F.,et al.Cell Metab. 10:63-75(2009).