

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

Specification

TMEM97 Antibody (N-term) - Product Information

Application	WB,E
Primary Accession	O5BJF2
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

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

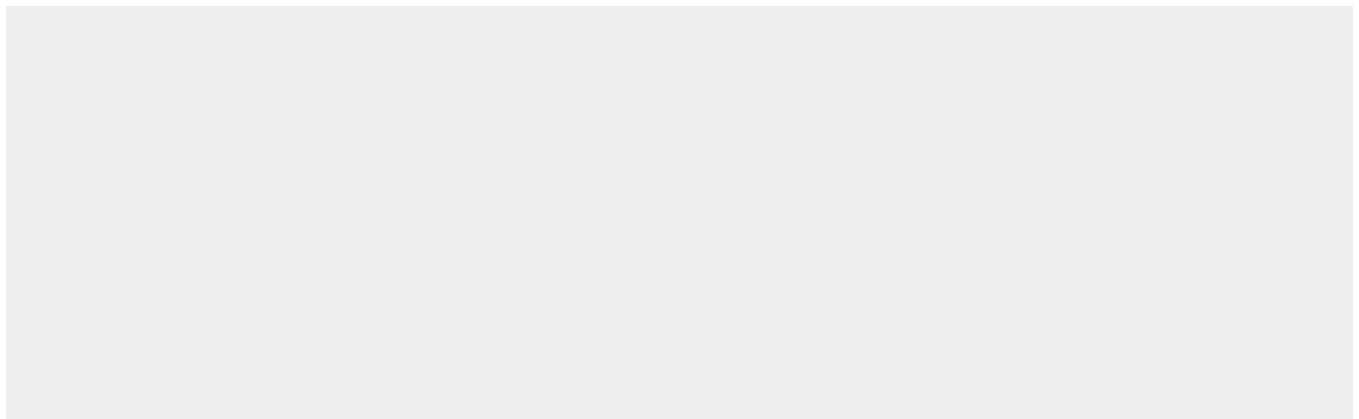
Widely expressed in normal tissues. Expressed in pancreatic, renal, breast, colon, ovarian surface epithelial (OSE) cells. Highly expressed in various proliferating cancer cells (PubMed:[23922215](#)).

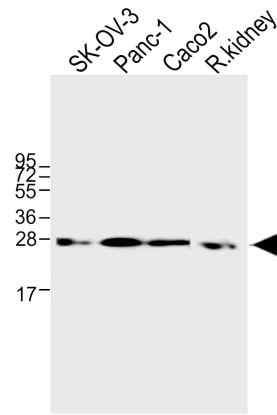
TMEM97 Antibody (N-term) - Protocols

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

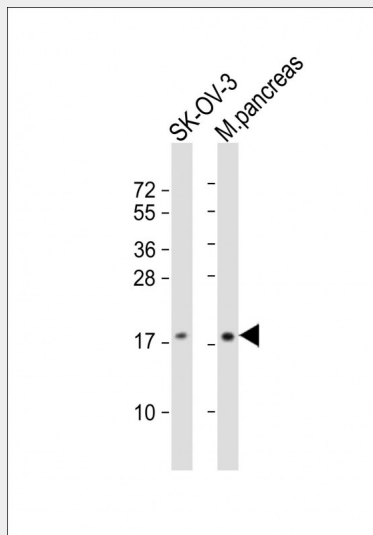
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

TMEM97 Antibody (N-term) - Images

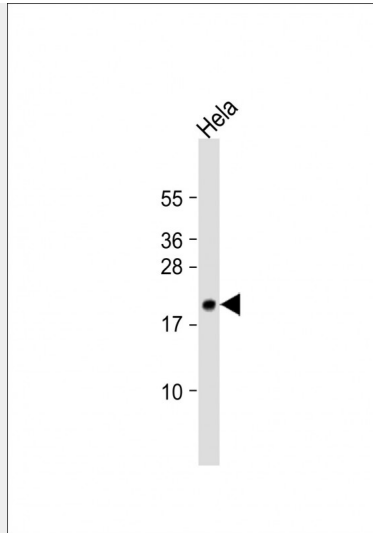




All lanes : Anti-TMEM97 Antibody (N-term) at 1:1000 dilution Lane 1: SK-OV-3 whole cell lysate
 Lane 2: Panc-1 whole cell lysate Lane 3: Caco2 whole cell lysate Lane 4: rat kidney lysate
 Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated
 at 1/10000 dilution. 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.



Anti-TMEM97 Antibody (N-term) at 1:2000 dilution + HeLa whole cell lysate Lysates/proteins at 20 μ g 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).