

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

**Specification**

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**TMEM97 Antibody (N-term) - Product Information**

Application	WB,E
Primary Accession	<a href="#">Q5BJF2</a>
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](#)).

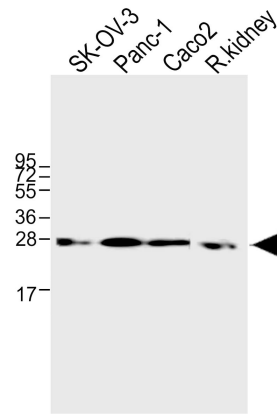
#### TMEM97 Antibody (N-term) - Protocols

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

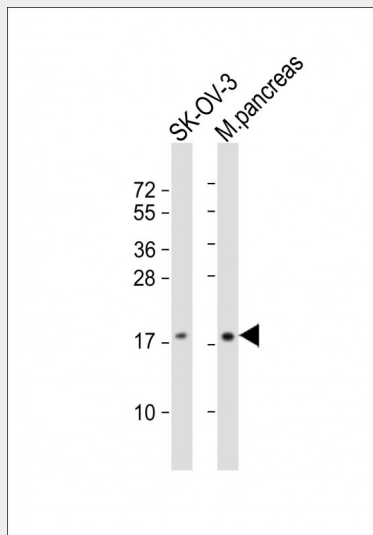
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### TMEM97 Antibody (N-term) - Images

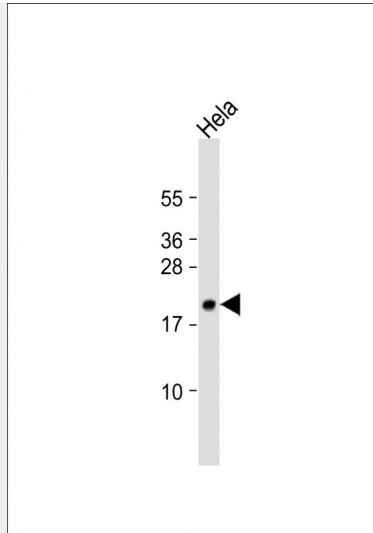




All lanes : Anti-TMEM97 Antibody (N-term) at 1:1000 dilution Lane 1: SK-OV-3 whole cell lysate  
 Lane 2: Panc-1 whole cell lysate Lane 3: Caco2 whole cell lysate Lane 4: rat kidney lysate  
 Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated  
 at 1/10000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