

**TMEM97 Blocking Peptide (N-term)**

Synthetic peptide  
Catalog # BP21745a

**Specification**

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**TMEM97 Blocking Peptide (N-term) - Product Information**

Primary Accession [Q5BJF2](#)

**TMEM97 Blocking Peptide (N-term) - Additional Information**

Gene ID 27346

**Other Names**

Transmembrane protein 97, Protein MAC30, TMEM97, MAC30

**Target/Specificity**

The synthetic peptide sequence is selected from aa 42-56 of HUMAN TMEM97

**Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**TMEM97 Blocking Peptide (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:<a href="http://www.uniprot.org/citations/19583955" target="\_blank">19583955</a>, PubMed:<a href="http://www.uniprot.org/citations/23922215" target="\_blank">23922215</a>, PubMed:<a href="http://www.uniprot.org/citations/25620095" target="\_blank">25620095</a>, PubMed:<a href="http://www.uniprot.org/citations/27378690" target="\_blank">27378690</a>, PubMed:<a href="http://www.uniprot.org/citations/28559337" target="\_blank">28559337</a>, PubMed:<a href="http://www.uniprot.org/citations/30443021" target="\_blank">30443021</a>, PubMed:<a href="http://www.uniprot.org/citations/34233061" target="\_blank">34233061</a>, PubMed:<a href="http://www.uniprot.org/citations/34799735" target="\_blank">34799735</a>, PubMed:<a href="http://www.uniprot.org/citations/35970844" target="\_blank">35970844</a>). 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:<a

href="http://www.uniprot.org/citations/30443021" target="\_blank">30443021</a>). 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:<a href="http://www.uniprot.org/citations/19583955" target="\_blank">19583955</a>, PubMed:<a href="http://www.uniprot.org/citations/27378690" target="\_blank">27378690</a>). 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:<a href="http://www.uniprot.org/citations/34799735" target="\_blank">34799735</a>, PubMed:<a href="http://www.uniprot.org/citations/37047353" target="\_blank">37047353</a>). 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:<a href="http://www.uniprot.org/citations/34233061" target="\_blank">34233061</a>, PubMed:<a href="http://www.uniprot.org/citations/35970844" target="\_blank">35970844</a>). May alter the activity of some cytochrome P450 proteins (PubMed:<a href="http://www.uniprot.org/citations/22292588" target="\_blank">22292588</a>). Although shows homologies with sterol isomerases (EXPERA domain), not able to catalyze sterol isomerization (Probable) (PubMed:<a href="http://www.uniprot.org/citations/34880501" target="\_blank">34880501</a>). However, may act as sensors of these molecules (Probable) (PubMed:<a href="http://www.uniprot.org/citations/34880501" target="\_blank">34880501</a>). 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 Blocking Peptide (N-term) - Protocols

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

- [Blocking Peptides](#)

#### TMEM97 Blocking Peptide (N-term) - Images

#### TMEM97 Blocking Peptide (N-term) - Background

Plays a role as a regulator of cellular cholesterol homeostasis.

#### TMEM97 Blocking Peptide (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).