

TMEM59 Protein, Human (Cell-Free, His)

Cat. No.:	HY-P702472
Synonyms:	Transmembrane protein 59; Liver membrane-bound protein
Species:	Human
Source:	E. coli Cell-free
Accession:	Q9BXS4 (A37-I323)
Gene ID:	9528
Molecular Weight:	35.5 kDa

PROPERTIES

AA Sequence	<pre> A F D S V L G D T A S C H R A C Q L T Y P L H T Y P K E E E L Y A C Q R G C R L F S I C Q F V D D G I D L N R T K L E C E S A C T E A Y S Q S D E Q Y A C H L G C Q N Q L P F A E L R Q E Q L M S L M P K M H L L F P L T L V R S F W S D M M D S A Q S F I T S S W T F Y L Q A D D G K I V I F Q S K P E I Q Y A P H L E Q E P T N L R E S S L S K M S Y L Q M R N S Q A H R N F L E D G E S D G F L R C L S L N S G W I L T T T L V L S V M V L L W I C C A T V A T A V E Q Y V P S E K L S I Y G D L E F M N E Q K L N R Y P A S S L V V V R S K T E D H E E A G P L P T K V N L A H S E I </pre>
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.22 µm filtered solution of Tris/PBS-based buffer, 6% Trehalose, pH 8.0.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O. For long term storage it is recommended to add 5-50% of glycerol (final concentration). Our default final concentration of glycerol is 50%. Customers could use it as reference.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	TMEM59 Protein functions as a regulator of autophagy in response to S.aureus infection, actively promoting the activation of LC3 (MAP1LC3A, MAP1LC3B, or MAP1LC3C). This regulatory role is executed through interaction with ATG16L1, leading to the formation of a functional complex between LC3 and ATG16L1. This interaction, documented in various studies,
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facilitates LC3 lipidation, ultimately resulting in the activation of autophagy. Beyond its involvement in autophagy regulation, TMEM59 Protein plays a crucial role in modulating the O-glycosylation and complex N-glycosylation steps during the Golgi maturation of several proteins, including APP, BACE1, SEAP, or PRNP. Notably, it inhibits the transport of APP to the cell surface and subsequent shedding. In molecular terms, TMEM59 Protein interacts directly with ATG16L1, specifically through its WD repeats, forming a pivotal connection in the intricate network governing autophagic processes and glycosylation events.

Caution: Product has not been fully validated for medical applications. For research use only.

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