

**TMEM59 Antibody**  
**Catalog # ASC11240****Specification**

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**TMEM59 Antibody - Product Information**

Application	WB, IHC, IF
Primary Accession	<a href="#">Q9BXS4</a>
Other Accession	<a href="#">NP_004863</a> , <a href="#">20070191</a>
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Application Notes	TMEM59 antibody can be used for detection of TMEM59 by Western blot at 1 µg/mL. Antibody can also be used for immunohistochemistry starting at 2.5 µg/mL. For immunofluorescence start at 20 µg/mL.

**TMEM59 Antibody - Additional Information**

Gene ID	9528
<b>Target/Specificity</b>	
TMEM59;	

**Reconstitution & Storage**

TMEM59 antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.

**Precautions**

TMEM59 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**TMEM59 Antibody - Protein Information**

**Name** TMEM59

**Synonyms** C1orf8

**Function**

Acts as a regulator of autophagy in response to S.aureus infection by promoting activation of LC3 (MAP1LC3A, MAP1LC3B or MAP1LC3C). Acts by interacting with ATG16L1, leading to promote a functional complex between LC3 and ATG16L1 and promoting LC3 lipidation and subsequent activation of autophagy (PubMed:<a href="http://www.uniprot.org/citations/27273576" target="\_blank">27273576</a>, PubMed:<a href="http://www.uniprot.org/citations/23376921" target="\_blank">23376921</a>). Modulates the O-glycosylation and complex N- glycosylation steps occurring during the Golgi maturation of several proteins such as APP, BACE1, SEAP or PRNP (PubMed:<a href="http://www.uniprot.org/citations/20427278" target="\_blank">20427278</a>).

Inhibits APP transport to the cell surface and further shedding (PubMed:<a href="http://www.uniprot.org/citations/20427278" target="\_blank">20427278</a>).

#### Cellular Location

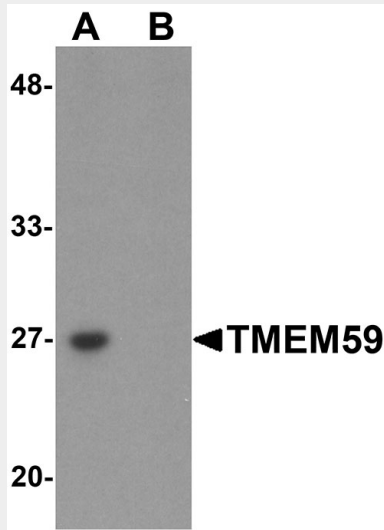
Late endosome membrane; Single-pass type I membrane protein. Lysosome membrane; Single-pass type I membrane protein. Cell membrane; Single-pass type I membrane protein. Golgi apparatus membrane; Single-pass type I membrane protein. Note=Mainly localizes to late endosomes/lysosomes. Probably first exported to the cell surface and then actively endocytosed to transiently localize in early endosomes on its way to the late endosomal/lysosomal compartment where it becomes quickly degraded.

#### TMEM59 Antibody - Protocols

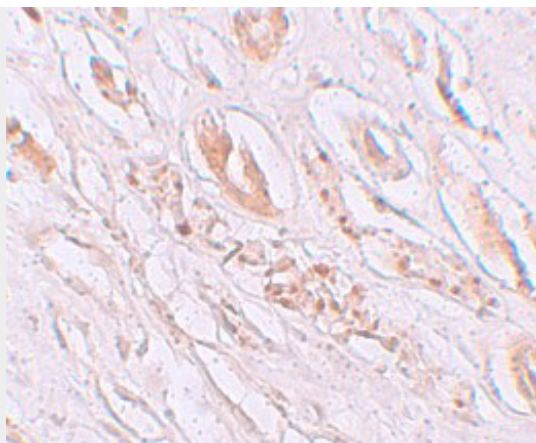
Provided below are standard protocols that you may find useful for product applications.

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

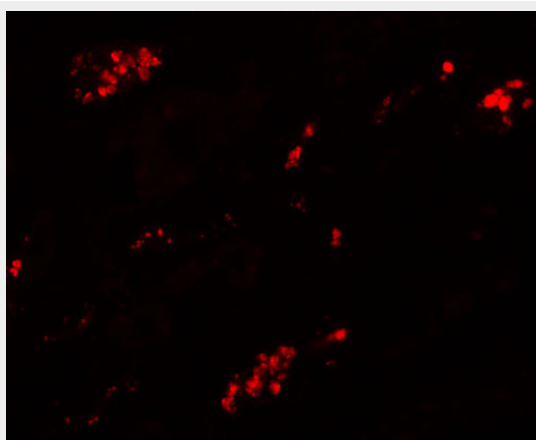
#### TMEM59 Antibody - Images



Western blot analysis of TMEM59 in human kidney tissue lysate with TMEM59 antibody at 1 µg/mL in (A) the absence and (B) the presence of blocking peptide.



Immunohistochemistry of TMEM59 in human kidney tissue with TMEM59 antibody at 2.5 µg/mL.



Immunofluorescence of TMEM59 in human kidney tissue with TMEM59 antibody at 20 µg/mL.

### **TMEM59 Antibody - Background**

TMEM59 Antibody: Processing of the amyloid precursor protein (APP) by two different proteases, called alpha- and beta-secretase, is a central regulatory event in the generation of the amyloid beta peptide (A $\beta$ ), which has a key role in Alzheimer disease (AD) pathogenesis. TMEM59, a Golgi-localized protein, modulates the O-glycosylation and complex N-glycosylation steps occurring during the Golgi maturation of several proteins such as APP, BACE1, SEAP or PRNP. It inhibits APP transport and shedding.

### **TMEM59 Antibody - References**

Schöbel S, Neumann S, Seed B, et al. Expression cloning screen for modifiers of amyloid precursor protein shedding. *Int. J. Dev. Neurosci.* 2006; 24:141-8.  
Schöbel S, Neumann S, Hertweck M, et al. A novel sorting nexin modulates endocytic trafficking and alpha-secretase cleavage of the amyloid precursor protein. *J. Biol. Chem.* 2008; 283:14257-68.  
Ullrich S, Münch A, Neumann S, et al. The novel membrane protein TMEM59 modulates complex glycosylation, cell surface expression, and secretion of the amyloid precursor protein. *J. Biol. Chem.* 2010; 285:20664-74.  
Elson GC, de Coignac AB, Aubry JP, et al. BSMAP, a novel protein expressed specifically in the brain whose gene is localized on chromosome 19p12. *Biochem. Biophys. Res. Commun.* 1999; 264:55-62.