

TMEM59 Antibody

Catalog # ASC11240

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q9BXS4
Other Accession	NP_004863 , 20070191
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	36223
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	TMEM59 antibody can be used for detection of TMEM59 by Western blot at 1 μ g/mL. Antibody can also be used for immunohistochemistry starting at 2.5 μ g/mL. For immunofluorescence start at 20 μ g/mL.

Additional Information

Gene ID	9528
Other Names	Transmembrane protein 59, Liver membrane-bound protein, TMEM59, C1orf8
Target/Specificity	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.

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: 23376921 , PubMed: 27273576). 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: 20427278). Inhibits APP transport to the cell surface and further

shedding (PubMed:[20427278](#)).

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.

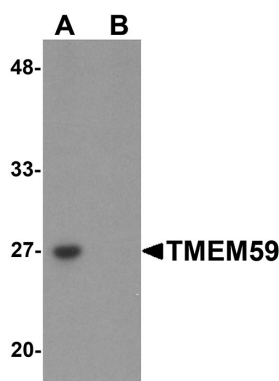
Background

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 (Abeta), 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.

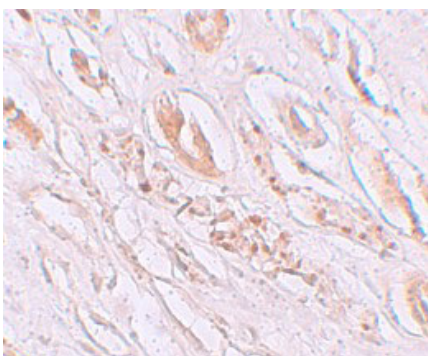
References

- Schubel 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.
- Schubel 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.

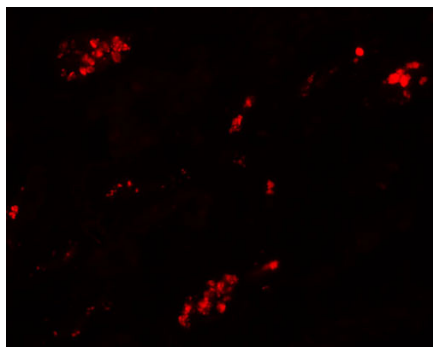
Images



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.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.