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TMEM106B Rabbit pAb

Catalog # AP98583

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	Q9NUM4
Other Accession	Q9NUM4
Reactivity	Rat, Human
Predicted	Mouse, Dog
Host	Rabbit
Clonality	Polyclonal
Calculated MW	31127
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human TMEM106B
Epitope Specificity	1-100/274
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the TMEM106 family.
DISEASE	Note=TMEM106B genotype, when containing 3 particular single-nucleotide polymorphisms, is strongly correlated with frontotemporal lobar degeneration with TAR DNA-binding protein (TDP-43) inclusions (FTLD-TDP). Frontotemporal lobar degeneration (FTLD) is the second most common cause of presenile dementia and 20% of patients with this neurodegenerative disease have autosomal dominant GRN mutations. Expression of TMEM106B associated with these polymorphisms is increased in frontal cortex of patients with FTLD-TDP compared to unaffected controls. Thus, increased TMEM106B expression in the brain may be linked to mechanisms of disease in FTLD-TDP and risk alleles confer genetic susceptibility by increasing gene expression.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	TMEM106B is a 274 amino acid single-pass membrane protein that is encoded by a gene which maps to human chromosome 7. Chromosome 7 houses over 1,000 genes and comprises nearly 5% of the human genome. Defects in some of the genes localized to chromosome 7 have been linked to Osteogenesis imperfecta, Pendred syndrome, Lissencephaly, Citrullinemia and Shwachman-Diamond syndrome. The deletion of a portion of the q arm of chromosome 7 is associated with Williams-Beuren syndrome, a condition characterized by mild mental retardation, an unusual comfort and friendliness with strangers and an elfin appearance. Deletions of portions of the q arm of chromosome 7 are also seen in a number of myeloid disorders, including cases of acute myelogenous leukemia and myelodysplasia.

Additional Information

Gene ID	54664

Other Names	HLD16; 2310036D22Rik; 5830455K21Rik; 6430519M21Rik; LRRGT00101; T106B_HUMAN; TMEM106B; T106B_MOUSE; T106B_RAT; transmembrane protein 106B
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:400-800,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	TMEM106B (HGNC:22407)
Function	In neurons, involved in the transport of late endosomes/lysosomes (PubMed:25066864). May be involved in dendrite morphogenesis and maintenance by regulating lysosomal trafficking (PubMed:25066864). May act as a molecular brake for retrograde transport of late endosomes/lysosomes, possibly via its interaction with MAP6 (By similarity). In motoneurons, may mediate the axonal transport of lysosomes and axonal sorting at the initial segment (By similarity). It remains unclear whether TMEM106B affects the transport of moving lysosomes in the anterograde or retrograde direction in neurites and whether it is important in the sorting of lysosomes in axons or in dendrites (By similarity). In neurons, may also play a role in the regulation of lysosomal size and responsiveness to stress (PubMed:25066864). Required for proper lysosomal acidification (By similarity).
Cellular Location	Late endosome membrane; Single-pass type II membrane protein. Lysosome membrane; Single-pass type II membrane protein. Cell membrane; Single-pass type II membrane protein. Note=Colocalizes with LAMP1. A small fraction resides on the cell surface (PubMed:37421949).
Tissue Location	Expressed in the brain, including in the frontal cortex (at protein level) (PubMed:35247328, PubMed:35344985). Expressed in lung epithelial cells (PubMed:33686287)

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