

TMEM38B Antibody

Catalog # ASC11031

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q9NVV0
Other Accession	NP_060582 , 8922461
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	32510
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	TMEM38B antibody can be used for detection of TMEM38B by Western blot at 1 - 2 μ g/mL. Antibody can also be used for immunohistochemistry starting at 5 μ g/mL. For immunofluorescence start at 20 μ g/mL.

Additional Information

Gene ID	55151
Other Names	Trimeric intracellular cation channel type B, TRIC-B, TRICB, Transmembrane protein 38B, TMEM38B, C9orf87
Target/Specificity	TMEM38B;
Reconstitution & Storage	TMEM38B 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	TMEM38B Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	TMEM38B (HGNC:25535)
Function	Intracellular monovalent cation channel required for maintenance of rapid intracellular calcium release. Acts as a potassium counter-ion channel that functions in synchronization with calcium release from intracellular stores (By similarity). Activated by increased cytosolic Ca(2+) levels (By similarity).
Cellular Location	Endoplasmic reticulum membrane {ECO:0000250 UniProtKB:Q9DAV9}; Multi-pass membrane protein {ECO:0000250 UniProtKB:Q9DAV9}

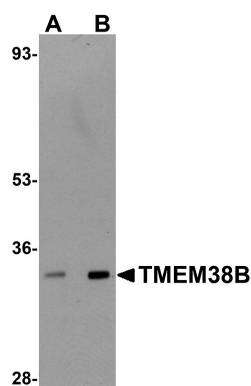
Background

TMEM38B Antibody: TMEM38A and TMEM38B are two recently identified trimeric intracellular cation (TRIC) channel subtypes. TMEM38B is expressed in most mammalian tissues, while TMEM38A is preferentially expressed in excitable tissues such as striated muscle and brain. Mice deficient in both TMEM38A and TMEM38B suffer embryonic cardiac failure; the cardiac myocytes display severe dysfunction in SR Ca²⁺ handling, weakened Ca²⁺ release, and reduced K⁺ permeability indicating that the TRIC cation channels are likely to act as counter-ion channels that function in synchronization with Ca²⁺ release from intracellular stores. Mice that were lacking only TMEM38B however, die shortly after birth due to respiratory failure and have lungs exhibiting severe histological defect and ultrastructural abnormalities in their alveolar type II epithelial cells, indicating that TMEM38B are essential for perinatal lung maturation. Other experiments have shown that TMEM38A and TMEM38B can act with junctophilin proteins to support efficient ryanodine receptor-mediated Ca²⁺ release in muscle cells.

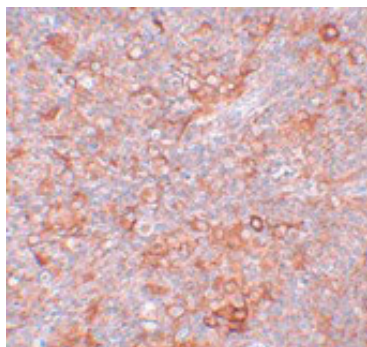
References

- Yazawa M, Ferrante C, Feng J, et al. TRIC channels are essential for Ca²⁺ handling in intracellular stores. *Nature* 2007; 448:78-82.
- Yamakazi D, Yamakazi T, and Takeshima H. New molecular components supporting ryanodine receptor-mediated Ca(2+) release: roles of junctophilin and TRIC channel in embryonic cardiocytes. *Pharmacol. Ther.* 2009; 121:265-72.
- Yamakazi D, Yamakazi T, and Takeshima H. New molecular components supporting ryanodine receptor-mediated Ca(2+) release: roles of junctophilin and TRIC channel in embryonic cardiocytes. *Pharmacol. Ther.* 2009; 121:265-72.

Images

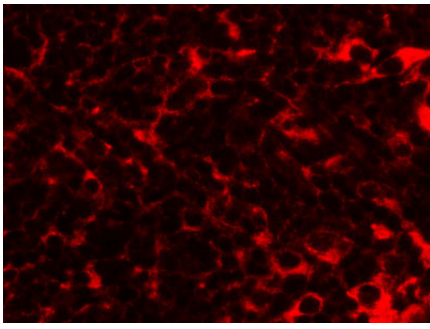


Western blot analysis of TMEM38B in rat thymus tissue lysate with TMEM38B antibody at (A) 1 and (B) 2 µg/mL.



Immunohistochemistry of TMEM38B in mouse thymus tissue with TMEM38B antibody at 5 µg/mL.

Immunofluorescence of TMEM38B in mouse thymus tissue with TMEM38B antibody at 20 µg/mL.



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