

TMEM38A Antibody

Catalog # ASC11030

Product Information

Application	WB, IF, E
Primary Accession	Q9H6F2
Other Accession	AAH01195 , 12654711
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	33260
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	TMEM38A antibody can be used for detection of TMEM38A by Western blot at 1 µg/mL. For immunofluorescence start at 20 µg/mL.

Additional Information

Gene ID	79041
Other Names	Trimeric intracellular cation channel type A, TRIC-A, TRICA, Transmembrane protein 38A, TMEM38A
Target/Specificity	TMEM38A;
Reconstitution & Storage	TMEM38A 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	TMEM38A Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	TMEM38A (HGNC:28462)
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). Opened by a change of voltage within the sarcoplasmic reticulum lumen (By similarity).
Cellular Location	Sarcoplasmic reticulum membrane {ECO:0000250 UniProtKB:A5A6S6}; Multi-pass membrane protein {ECO:0000250 UniProtKB:A5A6S6}. Nucleus membrane {ECO:0000250 UniProtKB:A5A6S6}

Background

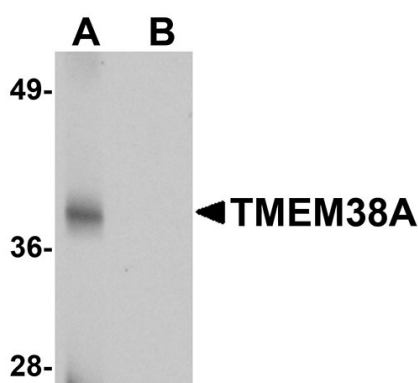
TMEM38A Antibody: TMEM38A and TMEM38B are two recently identified trimeric intracellular cation (TRIC) channel subtypes. TMEM38A is preferentially expressed in excitable tissues such as striated muscle and brain and localizes to the sarcoplasmic reticulum (SR) in muscle tissues. Mice deficient in both 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. 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

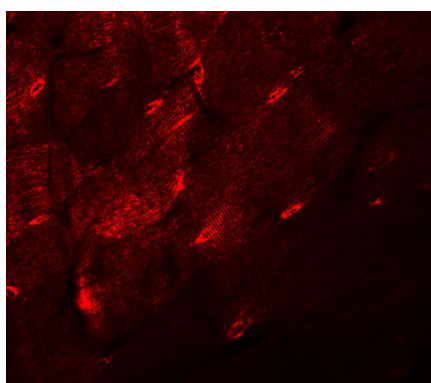
Yazawa M, Ferrante C, Feng J, et al. TRIC channels are essential for Ca²⁺ handling in intracellular stores. *Nature* 2007; 448:78-82.

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.

Images



Western blot analysis of TMEM38A in rat skeletal muscle tissue lysate with TMEM38A antibody at 1 µg/mL in (A) the absence and (B) the presence of blocking peptide.



Immunofluorescence of TMEM38A in mouse skeletal muscle tissue with TMEM38A antibody at 20 µg/mL.

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