

TMEM38B (C-14): sc-241060

BACKGROUND

TMEM38B (transmembrane protein 38B), also known as TRICB (trimeric intracellular cation channel type B), is a 291 amino acid multi-pass membrane protein that belongs to the TMEM38 family and exists as a homotrimer. The second transmembrane domain within TMEM38B has been proposed to cross only half of the lipid bilayer and to loop back into the cytosol. This results in the regions on each side of this domain to localize to the cytosolic face of the membrane. The cytosolic loop may form an ion-conducting pore. While it may act as a potassium counter-ion channel that functions in synchronization with calcium release from intracellular stores, TMEM38B is known to be a monovalent cation channel that is required for maintenance of rapid intracellular calcium release. The gene that encodes TMEM38B consists of more than 82,000 bases and maps to human chromosome 9q31.2.

REFERENCES

1. Yazawa, M., et al. 2007. TRIC channels are essential for Ca²⁺ handling in intracellular stores. *Nature* 448: 78-82.
2. Online Mendelian Inheritance in Man, OMIM[™]. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 611236. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
3. Yamazaki, D., et al. 2009. Essential role of the TRIC-B channel in Ca²⁺ handling of alveolar epithelial cells and in perinatal lung maturation. *Development* 136: 2355-2361.
4. Perry, J.R., et al. 2009. Meta-analysis of genome-wide association data identifies two loci influencing age at menarche. *Nat. Genet.* 41: 648-650.
5. Yamazaki, D., et al. 2009. New molecular components supporting ryanodine receptor-mediated Ca²⁺ release: roles of junctophilin and TRIC channel in embryonic cardiomyocytes. *Pharmacol. Ther.* 121: 265-272.
6. Fortes, M.R., et al. 2010. Association weight matrix for the genetic dissection of puberty in beef cattle. *Proc. Natl. Acad. Sci. USA* 107: 13642-13647.

CHROMOSOMAL LOCATION

Genetic locus: TMEM38B (human) mapping to 9q31.2.

SOURCE

TMEM38B (C-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of TMEM38B of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-241060 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

TMEM38B (C-14) is recommended for detection of TMEM38B of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with TMEM38A.

Suitable for use as control antibody for TMEM38B siRNA (h): sc-92563, TMEM38B shRNA Plasmid (h): sc-92563-SH and TMEM38B shRNA (h) Lentiviral Particles: sc-92563-V.

Molecular Weight of TMEM38B: 33 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker[™] Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.