

# TMEM178 (I-25): sc-102135

## BACKGROUND

Transmembrane protein 178 (TMEM178) is a 297 amino acid protein that is localized to the membrane. TMEM178 is a multi-pass membrane protein with identified homologs in mouse, rat and *Xenopus*. Human TMEM178 contains a 25 amino acid signal peptide and a mature chain that spans amino acids 26 to 297. Two isoforms of TMEM178 exist as a result of alternative splicing events. TMEM178 is encoded by a gene that maps to chromosome 2. The second largest human chromosome, 2 consists of 237 million bases encoding over 1,400 genes and making up approximately 8% of the human genome. Interestingly, chromosome 2 contains what appears to be a vestigial second centromere and vestigial telomeres which gives credence to the hypothesis that human chromosome 2 is the result of an ancient fusion of two ancestral chromosomes seen in modern form today in apes.

## REFERENCES

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4. Kudoh, J., et al. 1997. Localization of 16 exons to a 450-kb region involved in the autoimmune polyglandular disease type I (APECED) on human chromosome 21q22.3. *DNA Res.* 4: 45-52.
5. Nagamine, K., et al. 1997. Genomic organization and complete nucleotide sequence of the TMEM1 gene on human chromosome 21q22.3. *Biochem. Biophys. Res. Commun.* 235: 185-190.
6. Lafrenière, R.G., et al. 1997. Genomic structure of the human GT334 (EHOC-1) gene mapping to 21q22.3. *Gene* 198: 313-321.
7. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 602103. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
8. Deutsch, S., et al. 2005. Gene expression variation and expression quantitative trait mapping of human chromosome 21 genes. *Hum. Mol. Genet.* 14: 3741-3749.
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## CHROMOSOMAL LOCATION

Genetic locus: TMEM178 (human) mapping to 2p22.1; Tmem178 (mouse) mapping to 17 E3.

## STORAGE

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

## SOURCE

TMEM178 (I-25) is a purified rabbit polyclonal antibody raised against TMEM178 of human origin.

## PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

## APPLICATIONS

TMEM178 (I-25) is recommended for detection of TMEM178 of mouse, human and dog origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for TMEM178 siRNA (h): sc-94578, TMEM178 siRNA (m): sc-154415, TMEM178 shRNA Plasmid (h): sc-94578-SH, TMEM178 shRNA Plasmid (m): sc-154415-SH, TMEM178 shRNA (h) Lentiviral Particles: sc-94578-V and TMEM178 shRNA (m) Lentiviral Particles: sc-154415-V.

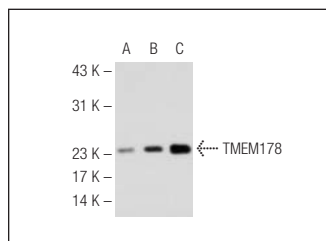
Molecular Weight of TMEM178: 33 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, TMEM178 (m): 293 Lysate: sc-179614 or TMEM178 (h): 293T Lysate: sc-175536.

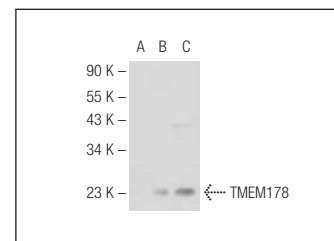
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

## DATA



TMEM178 (I-25): sc-102135. Western blot analysis of TMEM178 expression in non-transfected 293T: sc-110760 (A), mouse TMEM178 transfected 293T: sc-179614 (B) and Hep G2 (C) whole cell lysates.



TMEM178 (I-25): sc-102135. Western blot analysis of TMEM178 expression in non-transfected 293T: sc-117752 (A), human TMEM178 transfected 293T: sc-175536 (B) and Hep G2 (C) whole cell lysates.

## RESEARCH USE

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