SANTA CRUZ BIOTECHNOLOGY, INC.

TMEM17 (G-10): sc-514433

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

TMEM17 (transmembrane protein 17) is a 198 amino acid protein encoded by a gene mapping to human chromosome 2p15. 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. A number of genetic diseases are linked to genes on chromosome 2. Harlequin icthyosis, a rare and morbid skin deformity, is associated with mutations in the ABCA12 gene. The lipid metabolic disorder sitosterolemia is associated with ABCG5 and ABCG8. An extremely rare recessive genetic disorder, Alstrom syndrome is due to mutations in the ALMS1 gene. 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

1. Ijdo, J.W., et al. 1991. Origin of human chromosome 2: an ancestral telomere-telomere fusion. Proc. Natl. Acad. Sci. USA 88: 9051-9055.
2. Avarello, R., et al. 1992. Evidence for an ancestral alphoid domain on the long arm of human chromosome 2. Hum. Genet. 89: 247-249.
3. Hillier, L.W., et al. 2005. Generation and annotation of the DNA sequences of human chromosomes 2 and 4. Nature 434: 724-731.
4. Thomas, A.C., et al. 2006. ABCA12 is the major harlequin ichthyosis gene. J. Invest. Dermatol. 126: 2408-2413.

CHROMOSOMAL LOCATION

Genetic locus: TMEM17 (human) mapping to 2p15; Tmem17 (mouse) mapping to 11 A3.2.

SOURCE

TMEM17 (G-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 1-17 at the N-terminus of TMEM17 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TMEM17 (G-10) is available conjugated to agarose (sc-514433 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-514433 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514433 PE), fluorescein (sc-514433 FITC), Alexa Fluor® 488 (sc-514433 AF488), Alexa Fluor® 546 (sc-514433 AF546), Alexa Fluor® 594 (sc-514433 AF594) or Alexa Fluor® 647 (sc-514433 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514433 AF680) or Alexa Fluor® 790 (sc-514433 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-514433 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

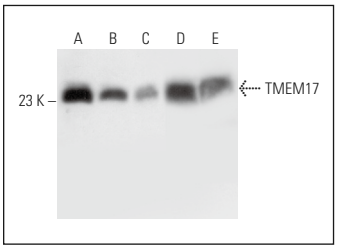
TMEM17 (G-10) is recommended for detection of TMEM17 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for TMEM17 siRNA (h): sc-94962, TMEM17 siRNA (m): sc-154408, TMEM17 shRNA Plasmid (h): sc-94962-SH, TMEM17 shRNA Plasmid (m): sc-154408-SH, TMEM17 shRNA (h) Lentiviral Particles: sc-94962-V and TMEM17 shRNA (m) Lentiviral Particles: sc-154408-V.

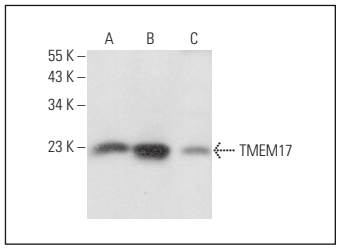
Molecular Weight of TMEM17: 23 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, RT-4 whole cell lysate: sc-364257 or human liver extract: sc-363766.

DATA



TMEM17 (G-10): sc-514433. Western blot analysis of TMEM17 expression in U-251-MG (**A**), HeLa (**B**) and RT-4 (**C**) whole cell lysates and human liver (**D**) and human skin (**E**) tissue extracts.



TMEM17 (G-10): sc-514433. Western blot analysis of TMEM17 expression in HeLa (**A**), A2058 (**B**) and F9 (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Zhang, X., et al. 2017. TMEM17 depresses invasion and metastasis in lung cancer cells via ERK signaling pathway. Oncotarget 8: 70685-70694.
2. Zhao, Y., et al. 2018. TMEM17 promotes malignant progression of breast cancer via AKT/GSK3β signaling. Cancer Manag. Res. 10: 2419-2428.
3. Yu, Z.L., et al. 2021. Protein-protein interaction analysis reveals a novel cancer stem cell related target TMEM17 in colorectal cancer. Cancer Cell Int. 21: 94.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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