# TMEM179 (T-15): sc-241051



The Boures to Overtion

#### **BACKGROUND**

TMEM179 (transmembrane protein 179) is a 233 amino acid protein encoded by a gene mapping to human chromosome 14. Chromosome 14 contains about 700 genes and 106 million base pairs and makes up about 3.5% of human cellular DNA. Chromosome 14 encodes the presinilin 1 (PSEN1) gene, which is one of the three key genes associated with the development of Alzheimer's disease. The SERPINA1 gene is located on chromosome 14 and when defective leads to the genetic disorder  $\alpha$ 1-antitrypsin deficiency. This disorder is characterized by severe lung complications and liver dysfunction. Notably, the immunoglobulin heavy chain locus is found on chromosome 14 and has been identified as a fusion with the chromosome 19 encoded protein BCL3 in the (14;19) translocations found in a variety of B cell malignancies.

## **REFERENCES**

- Heilig, R., Eckenberg, R., Petit, J., Fonknechten, N., Da Silva, C., Cattolico, L., Levy, M., Barbe, V., de Berardinis, V., Ureta-Vidal, A., Pelletier, E., Vico, V., Anthouard, V., Rowen, L., Madan, A., et al. 2003. The DNA sequence and analysis of human chromosome 14. Nature 421: 601-607.
- 2. Godbolt, A.K., Beck, J.A., Collinge, J., Garrard, P., Warren, J.D., Fox, N.C. and Rossor, M.N. 2004. A presentiin 1 R278l mutation presenting with language impairment. Neurology 63: 1702-1704.
- 3. Stolk, J., Seersholm, N. and Kalsheker, N. 2006. α1-antitrypsin deficiency: current perspective on research, diagnosis, and management. Int. J. Chron. Obstruct. Pulmon. Dis. 1: 151-160.
- 4. Vetrivel, K.S., Zhang, Y.W., Xu, H. and Thinakaran, G. 2006. Pathological and physiological functions of presenilins. Mol. Neurodegener. 1: 4.
- Albani, D., Roiter, I., Artuso, V., Batelli, S., Prato, F., Pesaresi, M., Galimberti, D., Scarpini, E., Bruni. A., Franceschi, M., Piras, M.R., Confaloni, A. and Forloni, G. 2007. Presenilin-1 mutation E318G and familial Alzheimer's disease in the Italian population. Neurobiol. Aging 28: 1682-1688.

# CHROMOSOMAL LOCATION

Genetic locus: TMEM179 (human) mapping to 14q32.33; Tmem179 (mouse) mapping to 12 F1.

## **SOURCE**

TMEM179 (T-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of TMEM179 of human origin.

## **PRODUCT**

Each vial contains 200  $\mu g$  lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-241051 P, ( $100 \mu g$  peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## **STORAGE**

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

#### **APPLICATIONS**

TMEM179 (T-15) is recommended for detection of TMEM179 of mouse, rat and human 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)], 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 other TMEM family members.

TMEM179 (T-15) is also recommended for detection of TMEM179 in additional species, including bovine and avian.

Suitable for use as control antibody for TMEM179 siRNA (h): sc-92362, TMEM179 siRNA (m): sc-154416, TMEM179 shRNA Plasmid (h): sc-92362-SH, TMEM179 shRNA Plasmid (m): sc-154416-SH, TMEM179 shRNA (h) Lentiviral Particles: sc-92362-V and TMEM179 shRNA (m) Lentiviral Particles: sc-154416-V.

Molecular Weight of TMEM179 isoform 1: 26 kDa.

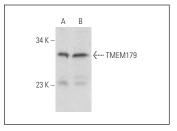
Molecular Weight of TMEM179 isoform 2: 22 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or K-562 whole cell lysate: sc-2203.

#### **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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## **DATA**



TMEM179 (T-15): sc-241051. Western blot analysis of TMEM179 expression in HeLa (A) and K-562 (B) whole cell lysates.

#### **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.