

TMEM87A (G-14): sc-136933

BACKGROUND

TMEM87A is a 494 amino acid protein encoded by a gene mapping to human chromosome 15. Encoding more than 700 genes, chromosome 15 is made up of approximately 106 million base pairs and is about 3% of the human genome. Angelman and Prader-Willi syndromes are associated with loss of function or deletion of genes in the 15q11-q13 region. In the case of Angelman syndrome, this loss is due to inactivity of the maternal 15q11-q13 encoded UBE3A gene in the brain by either chromosomal deletion or mutation. In cases of Prader-Willi syndrome, there is a partial or complete deletion of this region from the paternal copy of chromosome 15. Tay-Sachs disease is a lethal disorder associated with mutations of the HEXA gene, which is encoded by chromosome 15. Marfan syndrome is associated with chromosome 15 through the FBN1 gene.

REFERENCES

- Cachón-González, M.B., et al. 2006. Effective gene therapy in an authentic model of Tay-Sachs-related diseases. *Proc. Natl. Acad. Sci. USA* 103: 10373-10378.
- Zody, M.C., et al. 2006. Analysis of the DNA sequence and duplication history of human chromosome 15. *Nature* 440: 671-675.
- Diene, G., et al. 2007. The Prader-Willi syndrome. *Ann. Endocrinol.* 68: 129-137.
- Lalande, M., et al. 2007. Molecular epigenetics of Angelman syndrome. *Cell. Mol. Life Sci.* 64: 947-960.
- Maegawa, G.H., et al. 2007. Pyrimethamine as a potential pharmacological chaperone for late-onset forms of GM2 gangliosidosis. *J. Biol. Chem.* 282: 9150-9161.
- Makoff, A.J., et al. 2007. Detailed analysis of 15q11-q14 sequence corrects errors and gaps in the public access sequence to fully reveal large segmental duplications at breakpoints for Prader-Willi, Angelman, and inv dup(15) syndromes. *Genome Biol.* 8: R114.
- Ramirez, F., et al. 2007. Fibrillin-rich microfibrils: Structural determinants of morphogenetic and homeostatic events. *J. Cell. Physiol.* 213: 326-330.
- ten Dijke, P., et al. 2007. Extracellular control of TGF β signalling in vascular development and disease. *Nat. Rev. Mol. Cell Biol.* 8: 857-869.

CHROMOSOMAL LOCATION

Genetic locus: TMEM87A (human) mapping to 15q15.1; Tmem87a (mouse) mapping to 2 E5.

SOURCE

TMEM87A (G-14) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of TMEM87A of human origin.

STORAGE

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

PRODUCT

Each vial contains 100 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-136933 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TMEM87A (G-14) is recommended for detection of TMEM87A isoforms 1-3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other TMEM87 family members.

TMEM87A (G-14) is also recommended for detection of TMEM87A isoforms 1-3 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for TMEM87A siRNA (h): sc-90204, TMEM87A siRNA (m): sc-154506, TMEM87A shRNA Plasmid (h): sc-90204-SH, TMEM87A shRNA Plasmid (m): sc-154506-SH, TMEM87A shRNA (h) Lentiviral Particles: sc-90204-V and TMEM87A shRNA (m) Lentiviral Particles: sc-154506-V.

Molecular Weight of TMEM87A isoforms: 63/21/57 kDa.

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) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (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.