SANTA CRUZ BIOTECHNOLOGY, INC.

TMEM245 (E-18): sc-246017

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The Power to Question

BACKGROUND

TMEM245 (transmembrane protein 245), also known as CG2 or C9orf5, is a 911 amino acid multi-pass membrane protein that is widely expressed and belongs to the UPF0118 (TMEM245) family. TMEM245 exists as four alternatively spliced isoforms and is encoded by a gene that maps to human chromosome 9q31.3. Chromosome 9 consists of about 145 million bases and 4% of the human genome and encodes nearly 900 genes. Considered to play a role in gender determination, deletion of the distal portion of 9p can lead to development of male to female sex reversal, the phenotype of a female with a male X,Y genotype. Hereditary hemorrhagic telangiectasia, which is characterized by harmful vascular defects, is associated with the chromosome 9 gene encoding endoglin protein, ENG. Familial dysautonomia is also associated with chromosome 9 though through the gene IKBKAP. Notably, chromosome 9 encompasses the largest interferon family gene cluster.

REFERENCES

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3. Burmeister, T., et al. 2007. Atypical Bcr-Abl mRNA transcripts in adult acute lymphoblastic leukemia. Haematologica 92: 1699-1702.
4. Cottin, V., et al. 2007. Pulmonary vascular manifestations of hereditary hemorrhagic telangiectasia (Rendu-Osler disease). Respiration 74: 361-378.
5. Zeitz, M.J., et al. 2009. Organization of the amplified type I interferon gene cluster and associated chromosome regions in the interphase nucleus of human osteosarcoma cells. Chromosome Res. 17: 305-319.
6. Gold-von Simson, G., et al. 2009. Kinetin in familial dysautonomia carriers: implications for a new therapeutic strategy targeting mRNA splicing. Pediatr. Res. 65: 341-346.
7. Axelrod, F.B., et al. 2010. Neuroimaging supports central pathology in familial dysautonomia. J. Neurol. 257: 198-206.

CHROMOSOMAL LOCATION

Genetic locus: TMEM245 (human) mapping to 9q31.3; D730040F13Rik (mouse) mapping to 4 B3.

SOURCE

TMEM245 (E-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of TMEM245 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-246017 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TMEM245 (E-18) is recommended for detection of TMEM245 of mouse, rat and 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).

TMEM245 (E-18) is also recommended for detection of TMEM245 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for TMEM245 siRNA (h): sc-92711, TMEM245 siRNA (m): sc-142850, TMEM245 shRNA Plasmid (h): sc-92711-SH, TMEM245 shRNA Plasmid (m): sc-142850-SH, TMEM245 shRNA (h) Lentiviral Particles: sc-92711-V and TMEM245 shRNA (m) Lentiviral Particles: sc-142850-V.

Molecular Weight of TMEM245: 101 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.

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 or our catalog for detailed protocols and support products.